Intermec 条码打印机免费服务热线：400-1199-021

Intermec

User’s Guide

EasyCoder® PX4i Bar Code Label Printer

(IPL Version)

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EasyCoder® PX4i Bar Code Label Printer

(IPL Version)

IntermecTechnologiesCorporation

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Before You Begin

This section provides you with safety information, technical support information, and sources for additional product information.

Safety Summary

Your safety is extremely important. Read and follow all warnings and cautions in this document before handling and operating Intermec equipment. You can be seriously injured, and equipment and data can be damaged if you do not follow the safety warnings and cautions.

Do not repair or adjust alone

Do not repair or adjust energized equipment alone under any circumstances. Someone capable of providing first aid must always be present for your safety.

First aid

Always obtain first aid or medical attention immediately after an injury. Never neglect an injury, no matter how slight it seems.

Resuscitation

Begin resuscitation immediately if someone is injured and stops breathing. Any delay could result in death. To work on or near high voltage, you should be familiar with approved industrial first aid methods.

Energized equipment

Never work on energized equipment unless authorized by a responsible authority. Energized electrical equipment is dangerous. Electrical shock from energized equipment can cause death. If you must perform authorized emergency work on energized equipment, be sure that you comply strictly with approved safety regulations.

Safety Icons

This section explains how to identify and understand the warnings, cautions, and notes that are in this document. You may also see icons that tell you when to follow ESD procedures.

A warning alerts you of an operating procedure, practice, condition, or statement that must be strictly observed to avoid death or serious injury to the persons working on the equipment.

A caution alerts you to an operating procedure, practice, condition, or statement that must be strictly observed to prevent equipment damage or destruction, or corruption or loss of data.

This icon appears at the beginning of any procedure in this manual that could cause you to touch components (such as printed circuit boards) that are susceptible to damage from electrostatic discharge (ESD). When you see this icon, you must follow standard ESD guidelines to avoid damaging the equipment you are servicing.

- **Note:** Notes either provide extra information about a topic or contain special instructions for handling a particular condition or set of circumstances.

Global Services and Support

Warranty Information

To understand the warranty for your Intermec product, visit the Intermec website at www.intermec.com and click **Support** > **Returns and Repairs** > **Warranty**.

Disclaimer of warranties: The sample code included in this document is presented for reference only. The code does not necessarily represent complete, tested programs. The code is provided "as is with all faults." All warranties are expressly disclaimed, including the implied warranties of merchantability and fitness for a particular purpose.

Web Support

VisittheIntermecwebsiteatwww.intermec.comtodownload ourcurrentmanuals(inPDF).Toorderprintedversionsofthe Intermecmanuals,contactyourlocalIntermecrepresentativeor distributor.

VisittheIntermectechnicalknowledgebase(Knowledge Central)atwww.intermec.comandclickSupport>Knowledge Centraltoreviewtechnicalinformationortorequesttechnical supportforyourIntermecproduct.

Telephone Support

Theseservicesareavailablefrom Intermec.

Services	In the USA and Canada call 1-800-755-5505 and
OrderIntermec products	• Placeanorder.
OrderIntermecmedia	Orderprinterlabelsand
Orderspare parts	
Technical Support	
Service	
Servicecontracts	• Askaboutanexisting contract. • Renewacontract. • Inquireaboutrepair billingorotherservice invoicingquestions.

OutsidetheU. S. A. andCanada, contactyourlocalIntermec representative. Tosearchforyourlocalrepresentative, fromthe Intermecwebsite, clickAboutUs>ContactUs.

Service Location Support

Forthemostcurrentlistingofservicelocations, clickSupport> ReturnsandRepairs>RepairLocations.

FortechnicalsupportinSouthKorea, usetheafterservice locationslistedbelow:

AWOOSystems
102-1304SKVentium
522Dangjung-dong
Gunpo-si, Gyeonggi-doKorea, South435-776
Contact:Mr. SinbumKang
Telephone:+82-31-436-1191
E-mail:mjyun@awoo.co.kr

INInformationSystemPTDLTD
6thFloor
DaeguVentureCenterBldg95
Shinchun3Dong
Donggu, DaeguCity, Korea
E-mail:jmyou@idif.co.krorkorlim@gw.idif.co.kr

Who Should Read This Manual

ThisUser's Guideprovidesyouwithinformationaboutthe featuresoftheEasyCoderPX4iprinterandhowtoinstall, configure, operate, maintain, andtroubleshootit.

Related Documents

TheIntermecwebsiteatwww.intermec.comcontainsour documents(asPDFfiles)thatyoucandownloadforfree.

To download documents

1 VisittheIntermecwebsiteatwww.intermec.com.

2 Click**Support**>**Manuals**.

3 Inthe**SelectaProduct**field,choosetheproductthatyou wanttodownloaddocumentationfor.

ToorderprintedversionsoftheIntermecmanuals, contact yourlocalIntermecrepresentativeordistributor.

1 Introduction

ThischapterintroducestheEasyCoderPX4iprinterandcovers thefollowingtopics:

- DescriptionofEasyCoderPX4iPrinter
- SafetySummary
- ProductIdentification

Description of EasyCoder PX4i Printer

The EasyCoder PX4i printer is a high-volume thermal transfer printer with a printhead resolution of 8 dots/mm (203 dots/inch) or 16 dots/mm (406 dots/inch), depending on which printhead is installed. The maximum print width this 112 mm (4.5 in) with either printhead.

The EasyCoder PX4i printer offers a large number of useful features:

- High speed printing up to 300 mm/sec (12 in/sec)
- Flash memory SIMMs for firmware, fonts, and barcodes
- Built-in Compact Flash memory card adapter
- Built-in RS-232 and USB interfaces
- Provision for one or two extra interface boards including wired or wireless EasyLAN connections and parallel interface
- Keyboard and display with backlight
- Support for network monitoring through optional software tools

A large number of factory-installed or field-installable options are available, so the printer can be configured for a wider range of applications. See “Options” on page 73, for more information.

The printer is designed to work with the Intermec InterDriver and Intermec LabelShop. The InterDriver allows you to print labels from standard MS Windows applications, for example Microsoft Office. Intermec LabelShop is a series of label design programs that work under various versions of MS Windows.

The EasyCoder PX4i printer described in this manual supports the Intermec Programming Language (IPL) v2.30 or later. The EasyCoder PX4i printer that supports Intermec Fingerprint v8.30 is described in its own User’s Guide.

Safety Summary

Intermec assumes no responsibility regarding the CE Directive if the printer is handled, modified, or installed in any way other than that described in Intermec’s manuals.

- Read this manual carefully before connecting the printer.

- Movingpartsareexposedwhenthesidedoorsareopen,so ensurethatthedoorsareclosedbeforeyouoperatetheprinter.
- Donotremovetheleft-handcover.Dangerousvoltage!
- Donotremovethebottomplate.Dangerousvoltage!
- Donotputyourfingersinsidetheprintmechanismwhenthe powerison.
- Placetheprinteronanevensurfacewhichcansupportits weightofapproximately13kg(28.5lb)plussupplies.
- Donotspraytheprinterwithwater.Ifyouareusingahoseto cleanthepremisesinanindustrialenvironment,removethe printerorprotectitcarefullyfromsprayandmoisture.
- Carefullyreadthewarningtextontheenvelopebeforeusinga cleaningcard.

Product Identification

Themachinelabelisattachedtotheprinter’srearplateand containsinformationontype,model,andserialnumberaswell asACvoltage.Italsocontainsregulatoryagencymarkings indicatingcompliancewithspecificagencyregulations,ifany.

2 Installation

ThischapterexplainshowtounpackandinstalltheEasyCoder PX4iprinterandalsodescribestheprinter’svariouspartsin detail.Itcoversthefollowingtopics:

- UnpackingthePrinter
- ConnectingthePrinter
- ControlsandIndicators

Unpacking the Printer

Beforeyouinstalltheprinter,unpackandexamineitforpossible damageormissingparts.

To unpack the printer

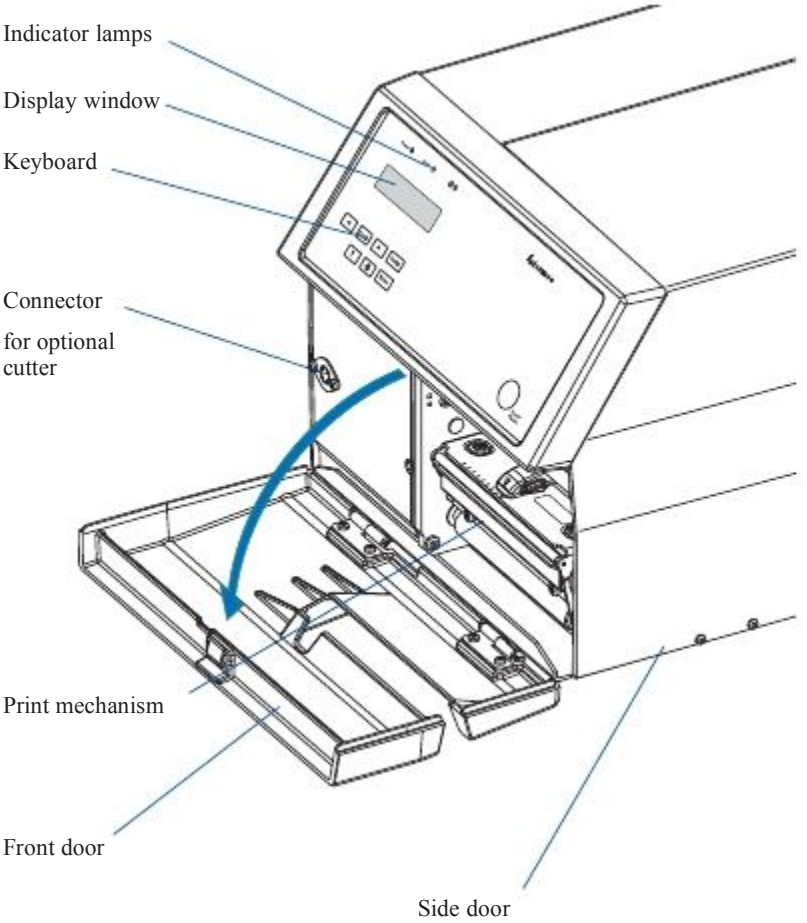
1. Opentheboxandlifttheprinterout.
2. Checkthattheprinterhasnotbeenvisiblydamagedduring transportation.Keepthepackingmaterialsincaseyouneedto moveorreshiptheprinter.
3. Checkthelabelontheprinter’srearplate,whichgivesthe voltage,thepartnumber,andtheserialnumber.
4. Checkthatanyoptionsyouorderedareincluded.
5. Checkthatalltheaccessoriesareincluded:
   - IntermecEasyCoderPX4iprinter
   - Adapterfor3inmediarollcore
   - Powercord
   - Qualitycheckcard
   - Cleaningcard
   - Compactdisk(CD)withsupportingsoftware,additional manuals,andproductinformation.
6. Checkthatthetypeofpowercordisappropriateforthelocal standard.Theprinterworkswithin90to265VAC, 50to60Hz.
7. Iftheprinterhasbeendamagedinanywayduring transportation,reportthedamagetothecarrierimmediately.
8. Ifthedeliveryisincorrectoranypartsaremissing,reportit immediatelytothedistributor.

Front View

At the front of the printer are the display window, the indicator lamps, and the keyboard. These features allow the operator to control and set up the printer manually.

The front door is held by a snap-lock. Open the front door to view the various parts on the printer's front.

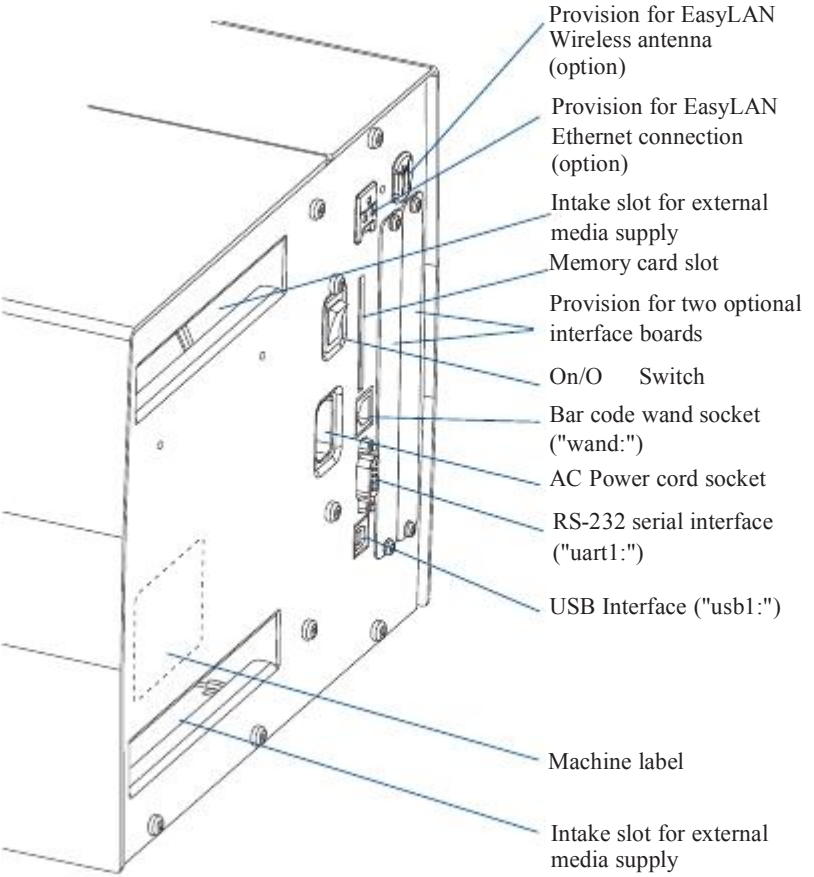
Refer to "Options" on page 73, for information on possible optional devices fitted on the printer's front.



Front View

Rear View

TherearplatecontainstheOn/Offswitch,theACpowercord socket,andvariousinterfaceconnectorsandslots.

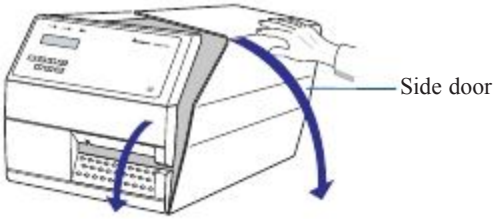

Provision for EasyLAN Wireless antenna (option)
Provision for EasyLAN Ethernet connection (option)
Intake slot for external media supply
Memory card slot
Provision for two optional interface boards
On/O Switch
Bar code wand socket ("wand:")
AC Power cord socket
RS-232 serial interface ("uart1:")
USB Interface ("usb1:")
Machine label
Intake slot for external media supply

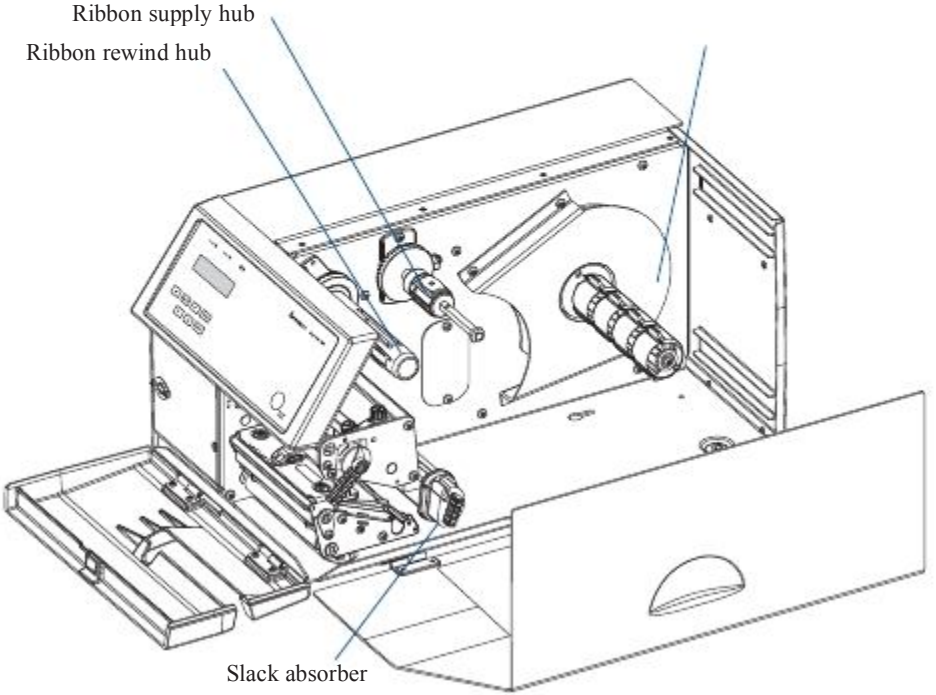
Rear View

Media Compartment

Themediacompartmentiscoveredbythesidedoorwhichcan beopened180° downwardstoprovidecompleteaccesstothe mediaandribbonloadingarea.Thedoorisheldclosedbya magneticlock.Itcanbecompletelyremovedbyopeningitand thenpullingitforward.

Themediacanbesuppliedfromarotatinghuborfroman externalsupplyoffanfoldedmediabehindtheprinter.Formore information,see “Options” onpage73.

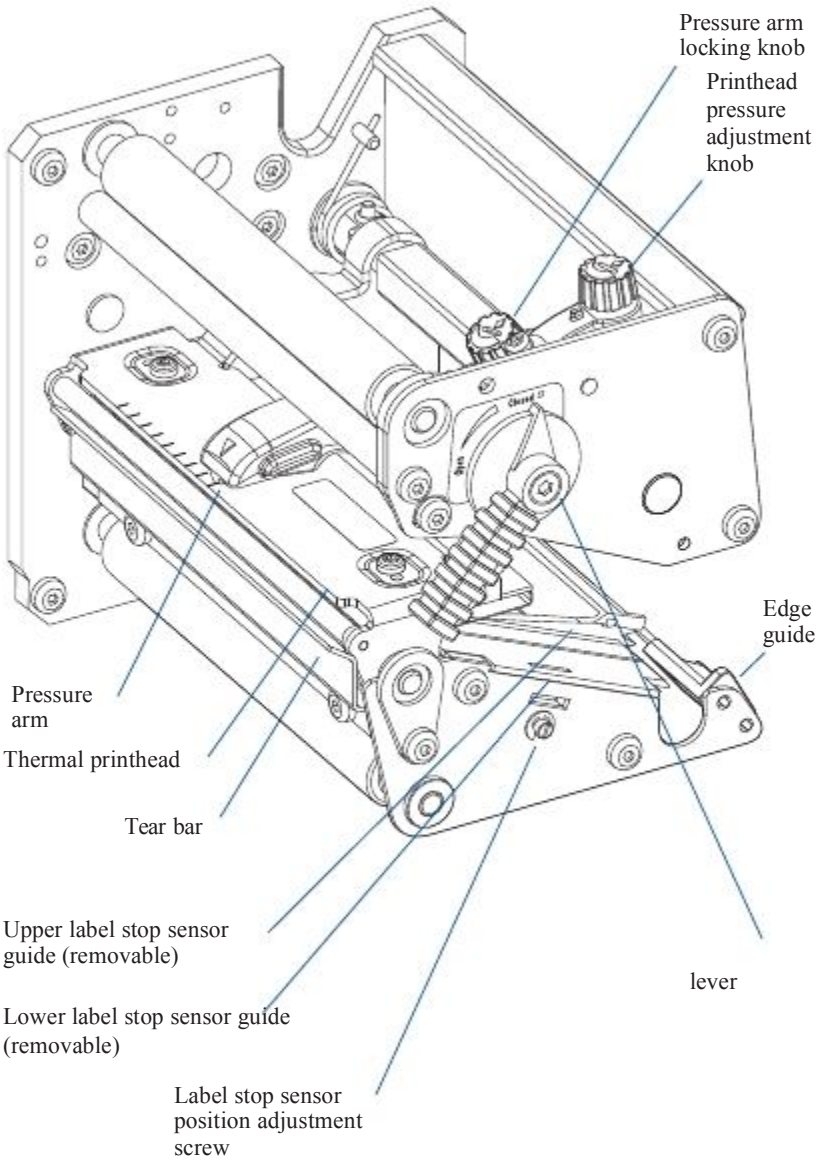




Media Compartment

Print Mechanism

Theprintmechanismfeaturesahigh-performancethermal printheadwithquick-mountfittingstofacilitatereplacement.



Print Mechanism

Connecting the Printer

To connect the printer to power

1 Place the printer on a level surface near an AC outlet. You should be able to access the back, front, and sides of the printer as necessary to load supplies and remove the printout.

2 Check that the printer is switched off.

3 Connect the power cord from the socket on the rear plate to an electrical outlet (90 to 265 VAC).

Computer

The EasyCoder PX4i printer is fitted with one 9-pin D-style subminiature (DB9) socket for the RS-232 serial interface port and one class B connector for the USB interface port. For more information about ports, see "Interfaces" on page 123.

RS-232 Serial Interface

Before you can use the serial interface, you may need to set up the communication parameters, such as baud rate, parity, etc. as described in "Setting Up the Printer" on page 53.

USB Interface

The printer supports USB v1.1. There is no communication setup for USB. For more information, refer to "Interfaces" on page 123.

Optional Interface and Network Boards

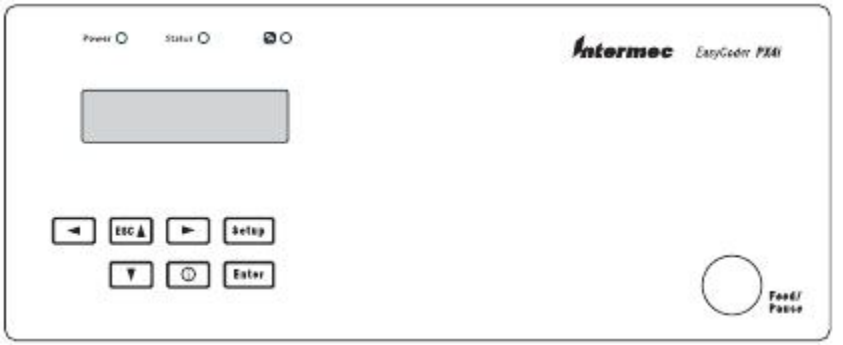
For details, see "Interface Boards" on page 77. Refer to "Setting Up the Printer" on page 53, "Navigating in Setup Mode" on page 68, and "Optional Interfaces" on page 126 for connection and setup instructions.

The printer can be set to scan all communication ports. When it detects incoming data on a port, the printer automatically switches to use that port for both input and output. Press **i** to get information on the active communication channels.

Switch off both PC and printer before connecting them together.

Controls and Indicators

TheEasyCoderPX4iprinterhasseveralwaysofcommunicating directlywithitsoperator:threecoloredLEDs,adisplaywindow, amembrane-switchkeyboard,andabeeper.



Display and controls

Indicator Lamps

TheindicatorsarecoloredLEDs(LightEmittingDiodes)andare usedforthefollowingpurposes:

Power

Power(solidgreen)indicatesthatthepowerison.

Status

Status(solidgreen)indicatesthattheprinterisreadyforuse.

Status(flashinggreen)indicatesthattheprinteris communicating.

Status(solidred)indicatesanerrorcondition(see “Troubleshooting” onpage79).

IntermecReady-to-Workindicator(blue;on,blink,oroff).The indicatorhasthreedifferentstates:On,Blinking,andOff.When theindicatorisOn,theprinterisreadyforuse.Whenthe indicatorisblinking,theprintermaybeinitializing,waitingfor externalresources,orinneedofuserattention.Whenthe indicatorisoff,theprinterisnotreadytooperate.

Display

ThedisplaywindowcontainsanLCD(LiquidCrystalDisplay) withbackgroundilluminationandtwolinesoftext,eachwith16 characters.Itshowsamessagewhencertainerrorsoccurand guidestheoperatorthroughupgrading,startup,andsetup.The followingerrorsarereported:

Error Messages and Conditions

Message Displayed
PAUSE
PAPEROUT
RIBBONOUT
PRINTHEADUP/PRESSPrintheadlifted FEED
OPEN&SHUTCUTTERCuttererror
RIBBONFITTED
PAPERFAULT
PSUERROR
PSUOVERTEMP
PRINTHEADHOT

Keyboard

Thekeyboardisofthemembrane-switchtypeandhassevenkeys. Thekeyboardissupplementedbyalarge**Feed/Pause**button. Somekeyshavehard-codedfunctionsinthestartupandsetup modes.

Keyboard Buttons

Button	
Feed/Pausebutton	
Setup	
Feed	
Feed + Shift	
ⓘ	Displayerrormessages andcommunicationchannelinformation.
F1 ◄ F3 ►	Scrollbetweentypesofinformationafter pressing**i**.Possibleerrormessagesand informationonactivecommunications channelsareshowninaloop.

Beeper

Thebeeperacknowledgesthatakeyhasbeenpressed.Optionally, anaudiblealarmcanbeenabledusinganIPLcommand.Itwill startbeepingatpaperoutandribbonoutandwillcontinue beepinguntilthestartofreload.

3 Starting Up

Thischapterexplainshowtostartuptheprinterafterinstallation orafterhavingbeenswitchedoff.

Switching On the Printer

Beforeswitchingontheprinter,makethenecessaryconnections, andcheckthattheprintheadisengaged.

SwitchonthepowerusingtheOn/Offswitchontherearplate. The “Power” LEDonthefrontpanellightsupwhenthepoweris on.Waitforafewmomentswhiletheprinterloadstheprogram andrunssomeself-diagnostictests.TheDisplayWindowwill showthefollowingprogressindicator.

```
      Starting
```

Afterashorttime,theprinterisinitialized.Theprogressofthe initializationisindicatedbyanincreasingnumberofcolonson thelowerlineinthedisplay.

```
Initializing
:::
```

Whentheinitializationiscompleted,alabelisfedout.The followingmessage,whichistheIPLversionnumber,appearsin theDisplayWindow,indicatingthattheprinterisreadyfor operation.

```
IPL 2.30
```

4 Loading Media

Thischapterexplainshowtoloadtheprinterwithvariouskinds ofcontinuous,gap,ormarkmediaforthefollowingmodesof operation:

- Tear-Off(Straight-Through)
- Cut-Off(Cutter)
- Peel-Off(Self-adhesiveStrip)
- InternalBatchTakeup(Roll-to-Roll)
- ExternalSupply(FanfoldorContinuousStock)

Tear-Off (Straight-Through)

TheEasyCoderPX4iprintercanprintonlabels,tickets,tags,and continuousstockinvariousforms.Thissectiondescribesthecase whenthemediaistornoffmanuallyagainsttheprinter’ stearbar. Thismethodisalsoknownas “straight-throughprinting.”

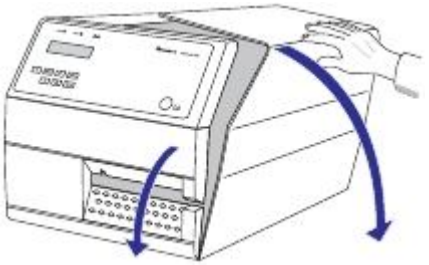
Tear-offcanbeusedfor:

- Non-adhesivecontinuousstock
- Self-adhesivecontinuousstockwithliner
- Self-adhesivelabelswithliner(gaporcontinuousstock)
- Ticketswithgaps(gapstock),withorwithoutperforations
- Ticketswithblackmarks(markstock),withorwithout perforations

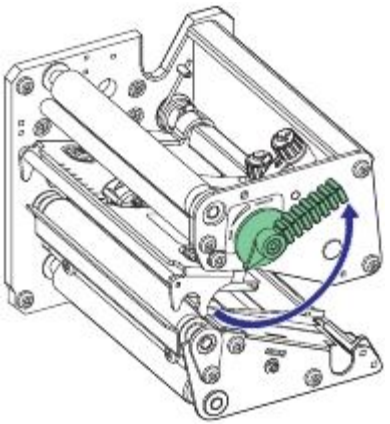
Anoptionallabeltakensensorcanholdtheprintingofthenext copyinthebatchuntilthepresentcopyhasbeenremoved.For moreinformation,see “LabelTakenSensor” onpage77.

To load media for tear-off operation

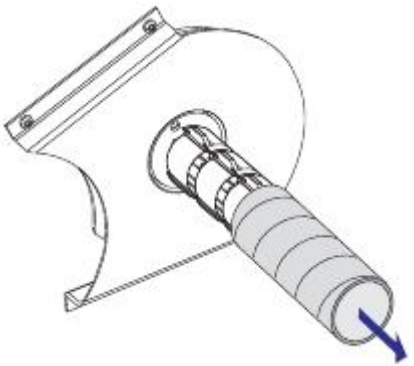
1Openthefrontandsidedoors.



2Turntheprintheadliftlevercounter-clockwisetoraisethe printhead.

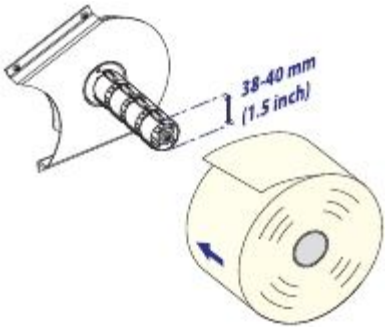


3Removeanyemptycorefromthemediasupplyhub.

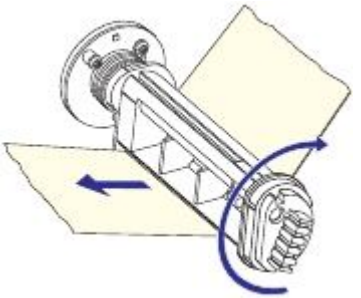


4 Inthecaseofamediarollwitha76mm(3in)core,fitan adapteronthemediasupplyhub.

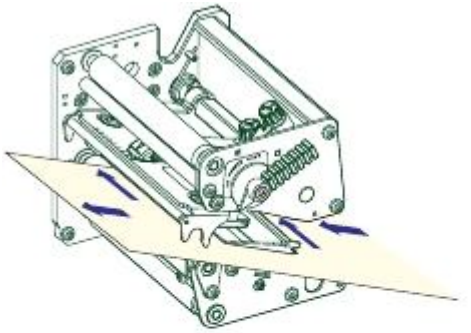
5 Fitanewrollofmediaontothemediasupplyhubandpush therollinwardsasfarasitwillgo.



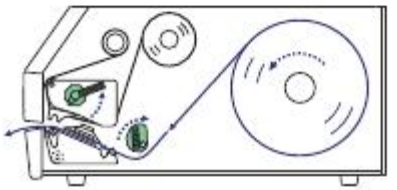
6 Routethemediaunderneaththeslackabsorberandforward towardstheprintmechanism.Theslackabsorbercanbe rotatedforbetteraccessandthensnap-lockedinopen position.



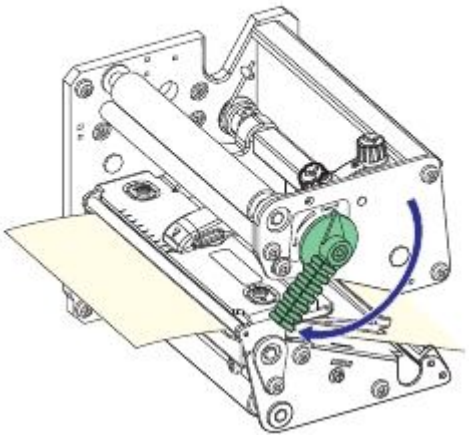
7 Route the media through the print unit and push it inwards as far as it will go.



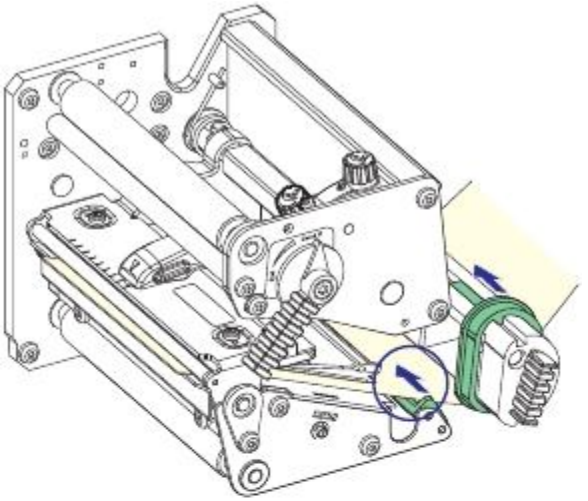
8 This diagram shows the path the media will take through the printer.



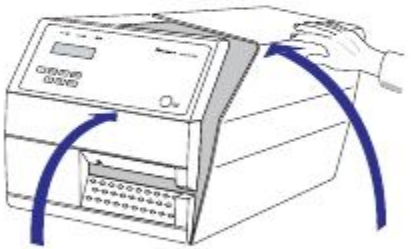
9 Turn the printhead lift lever to the "closed" position.



10 Adjust the position of the green edge guides so that the media is guided with a minimum of play.



11 Close the front and side doors.



12 Press **Feed/Pause** to advance the media and adjust the media feed. Tear off the media by grabbing the outer edge and pulling downwards.

Cut-Off

TheEasyCoderPX4iprintercanprintonlabels,tickets,tags,and continuousstockinvariousforms.Thissectiondescribesthecase whenthemediaistobecutoffbyanautomaticpapercutter (option).

Cut-offcanbeusedfor:

- Non-adhesivecontinuousstock
- Self-adhesivelabelswithliner(cutonlylinerbetweenlabels)

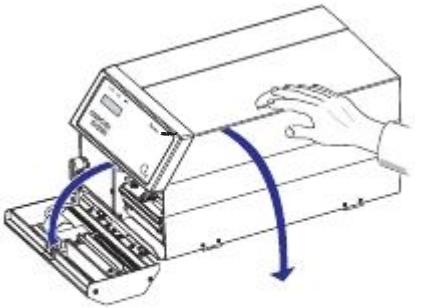
Thecutterisdesignedtocutthroughpaper-basedmediawitha thicknessbetween60and175µm,whichroughlycorrespondsto apaperweightof60to175grams/m2(basisweight40to120 lb.).Thecuttershouldnotbeusedtocutthroughlabelsbecause theadhesivewillsticktotheshears,whichcandamagethecutter.

Theoptionallabeltakensensorcannotbeusedwiththecutter.

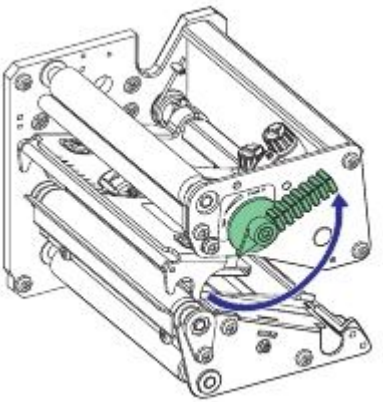
Therotatingcuttingbladecanbeaccidentlyactivatedwhilethe cutterisopen.Toavoidanyriskofinjurytofingers,alwaysswitch offthepowerbeforeloadingmediaand/orribbonina cutter-equippedprinter.

To load media for cut-off operation

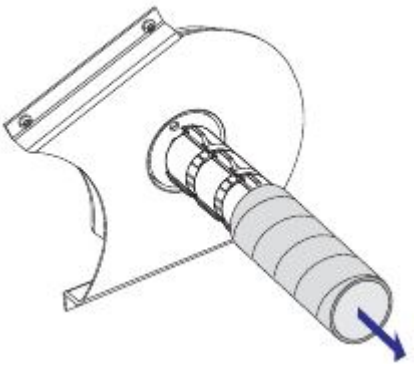
1Switchoffthepower.Openthecutterandthesidedoor.



2Turntheprintheadliftlevercounterclockwisetoraisethe printhead.

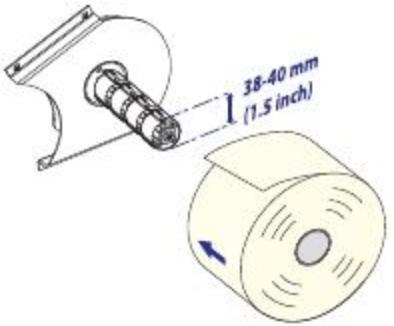


3Removeanyemptycorefromthemediasupplyhub.

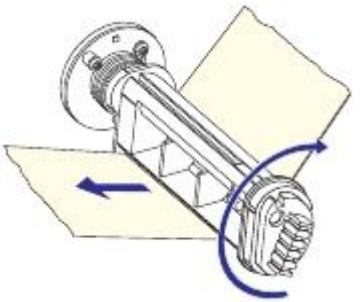


4Inthecaseofamediarollwitha76mm(3in)core,fitan adapteronthemediasupplyhub.

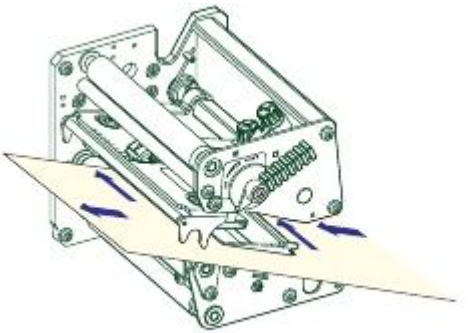
5Fitanewrollofmediaontothemediasupplyhubandpush therollinwardsasfarasitwillgo.



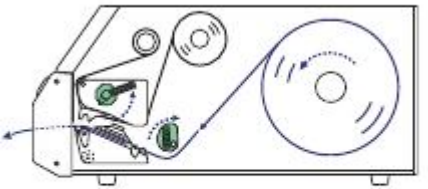
6Routethemediaunderneaththeslackabsorberandforward towardstheprintmechanism.Theslackabsorbercanbe rotatedforbetteraccessandthensnap-lockedinopen position.



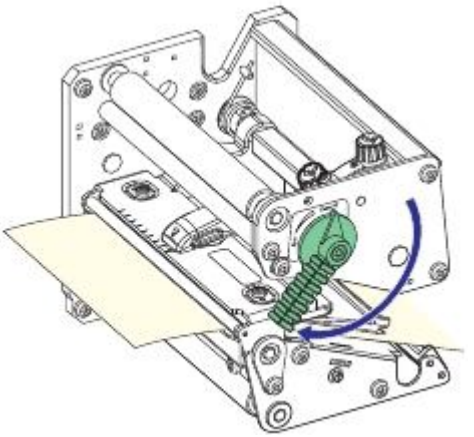
7 Route the media through the print unit and push it inwards as far as it will go.



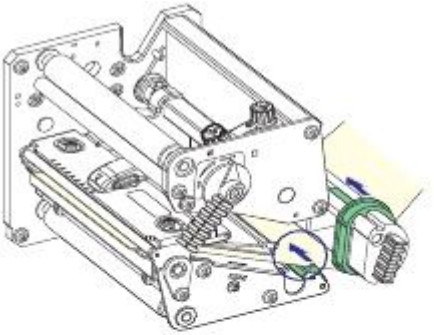
8 This diagram shows the path the media will take through the printer.



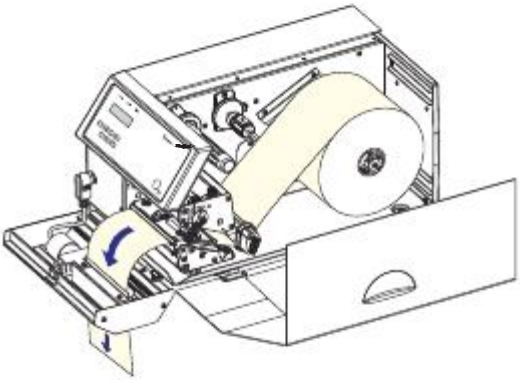
9 Turn the printhead lift lever to the "closed" position.



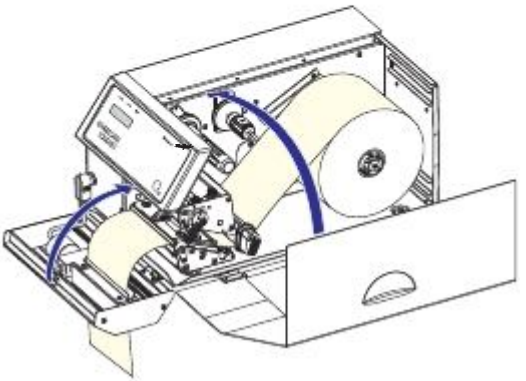
10 Adjust the position of the green edge guides so that the media is guided with a minimum of play.



11 Route the media through the cutter between the two guide plates.



12 Close the cutter unit while pulling on the end of the media. Close the side door and then switch the power on.



13 Press **Feed/Pause** to advance the media and adjust the media feed.

Peel-Off (Self-Strip)

The EasyCoder PX4i printer can print on labels, tickets, tags, and continuous stock in various forms.

This section describes the case when self-adhesive labels are separated from the liner immediately after printing, which requires an optional internal liner/batch takeup unit. For more information, see “Liner/Batch Takeup Kit” on page 75. This is also known as “Self-strip” operation.

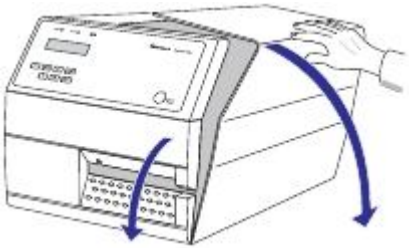
Peel-off can only be used for self-adhesive labels with liner.

An optional label-taken sensor can hold the printing of the next label in a batch until the present label has been removed. See “Label Taken Sensor” on page 77.

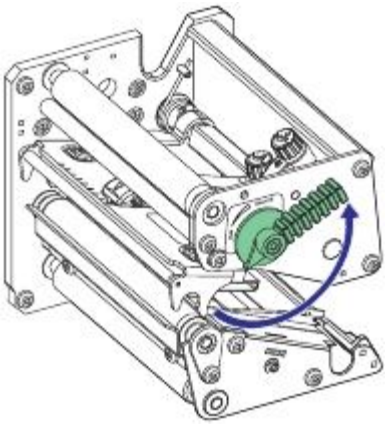
Note: Peel-off operation sets high demands on the media for proper label stiffness, release characteristics of the adhesive and liner, resistance against electrostatic charge, and so on. If these specific requirements are not met, the labels will not dispense properly. Consult your media supplier or test the media to make sure it is suitable for your application.

To load media for peel-off operation

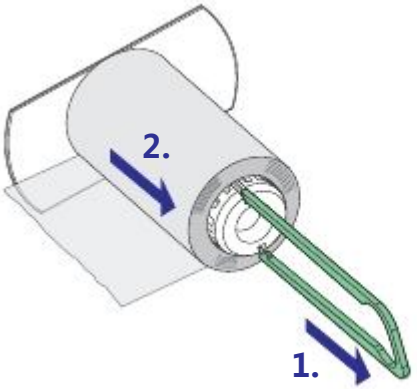
1Openthefrontandsidedoors.



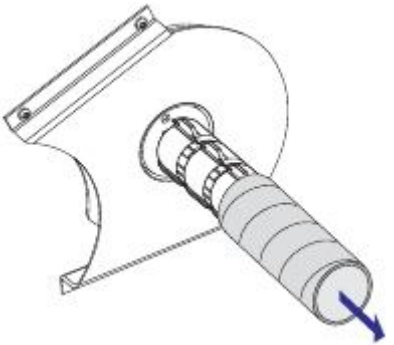
2Turntheprintheadliftlevercounter-clockwisetoraisethe printhead.



3Pulloutthegreenclip(1)onthelinertakeuphubanddispose ofanywound-upliner(2).

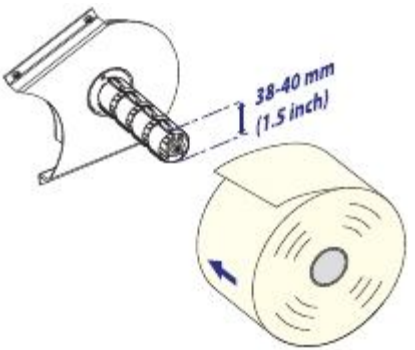


4Removeanyemptycorefromthemediasupplyhub.



5Inthecaseofamediarollwitha76mm(3in)core,fitan adapteronthemediasupplyhub.

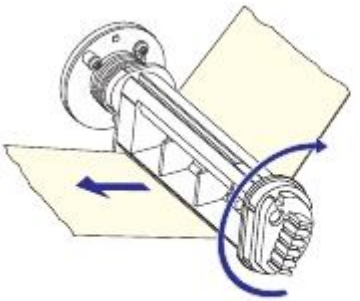
6Fitanewrollofmediaontothemediasupplyhubandpush therollinwardsasfarasitwillgo.

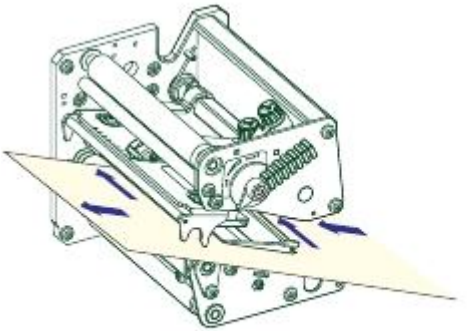


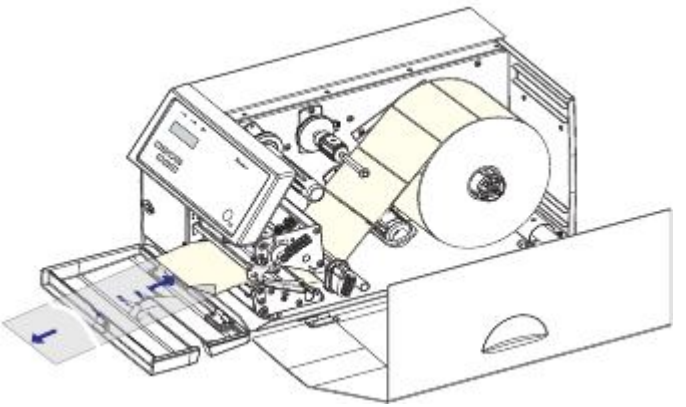
7 Route the media underneath the slack absorber and forward towards the print mechanism. The slack absorber can be rotated for better access and then snap-locked in open position.

8 Route the media through the print unit and push it inwards as far as it will go.

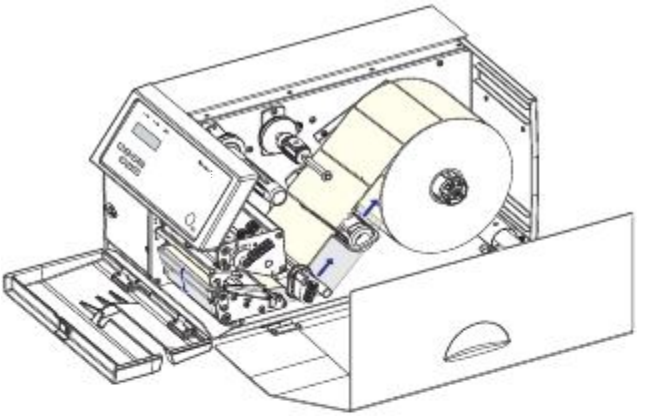
9 Pull out approximately 40 cm (15 in) of labels and remove the labels from the liner.



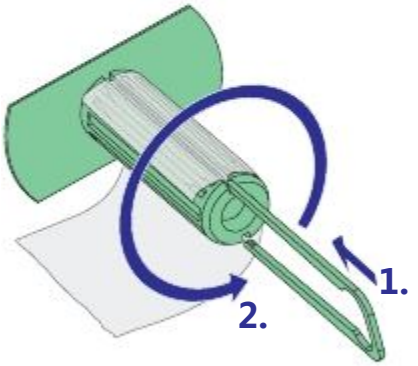




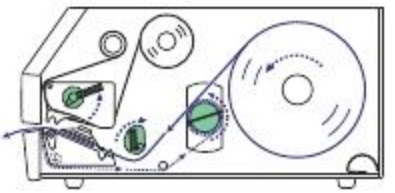
10 Route the liner around the tear bar and back under the print unit.



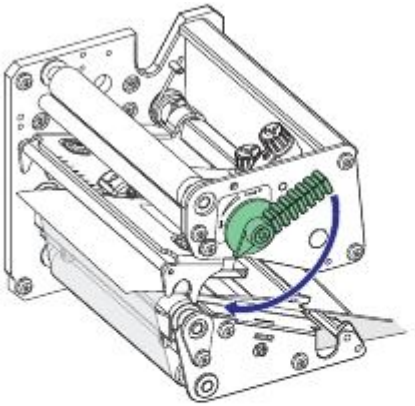
11 Secure the liner to the takeup hub with the green clip (1) and rotate the hub (2) until the media is pulled tight.



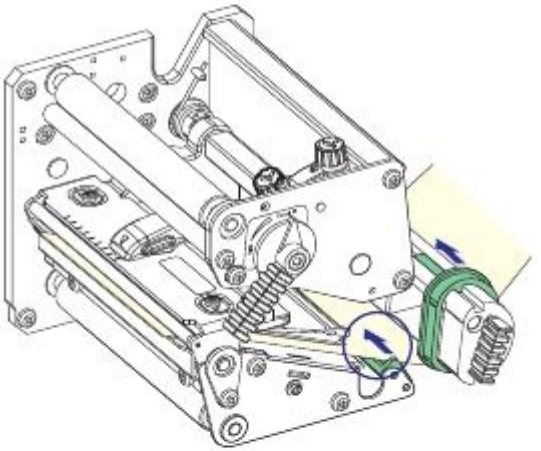
12 This diagram shows the path the media and liner will take through the printer.



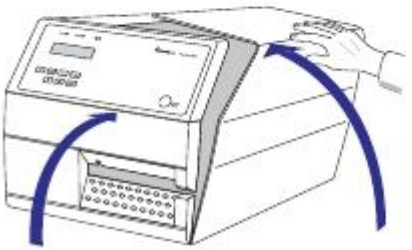
13Turntheprintheadliftlevertothe“closed”position.



14Adjustthepositionofthegreenedgeguidessothatthemedia isguidedwithaminimumofplay.



15Closethefrontandsidedoors.



16 Press **Feed/Pause** to advance the media and adjust the media feed.

Internal Batch Takeup (Roll-to-Roll)

The EasyCoder PX4i printer can print on labels, tickets, tags, and continuous stock in various forms. This section describes the case when printed labels fitted on liner (backing paper) or pre-perforated tickets and tags are wound up inside the printer. The roll of printed labels, tickets, or tags can then be removed and behandled manually. This requires an optional internal liner/batch takeup unit.

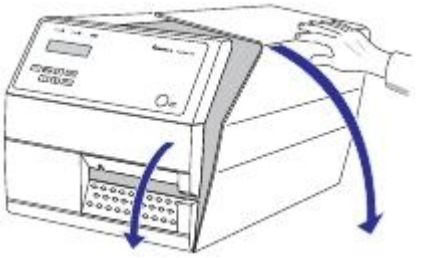
The takeup hub can accommodate 30 to 40% of a full-size media roll.

Internal batch takeup can be used for:

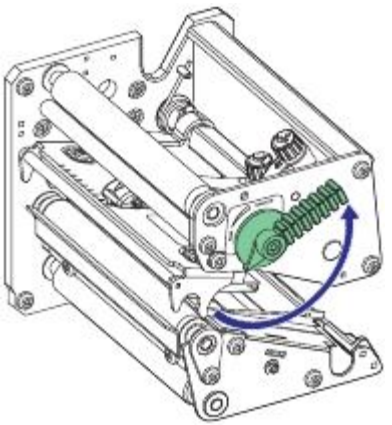
- Self-adhesive labels fitted on liner
- Pre-perforated tickets with gaps
- Pre-perforated tickets with marks

To load media for internal batch takeup operation

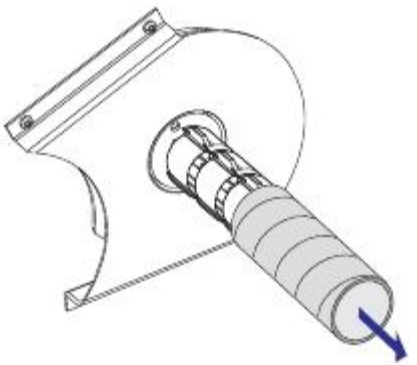
1Openthefrontandsidedoors.



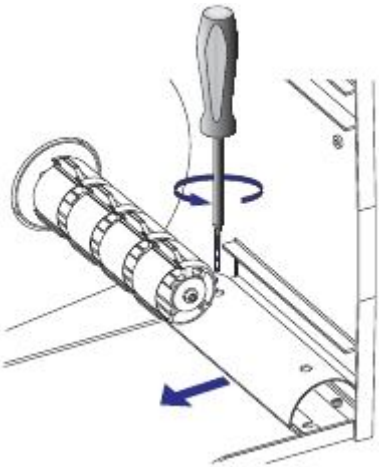
2Turntheprintheadliftlevercounter-clockwisetoraisethe printhead.



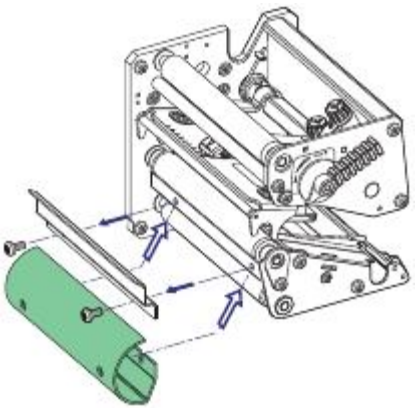
3Removeanyemptycorefromthemediasupplyhub.



4 Loosen the single screw that holds the guide plate at the rear of the media compartment.

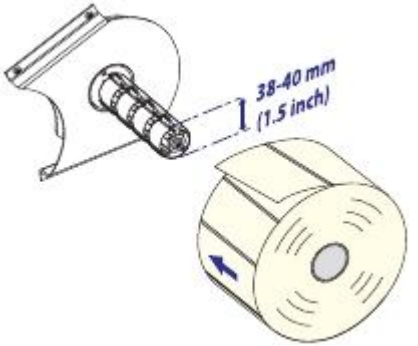


5 Remove the tear bar from the print unit and replace it with the guide plate.

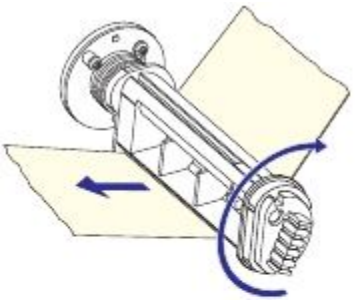


6Inthecaseofamediarollwitha76mm(3in)core,fitan adapteronthemediasupplyhub.

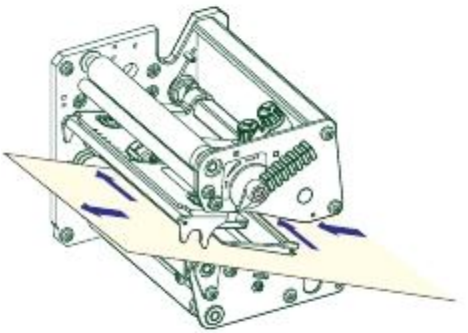
7Fitanewrollofmediaontothemediasupplyhubandpush therollinwardsasfarasitwillgo.



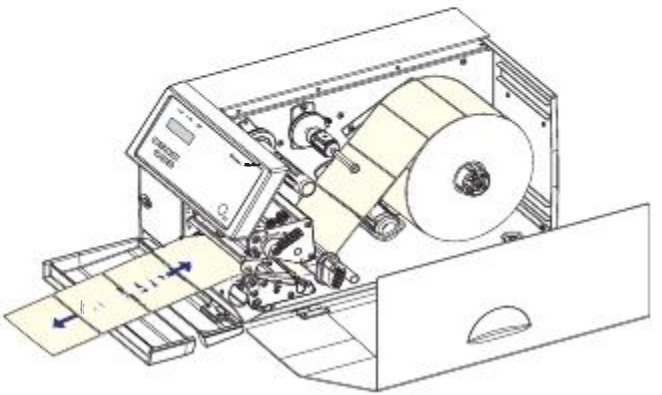
8Routethemediaunderneaththeslackabsorberandforward towardstheprintmechanism.Theslackabsorbercanbe rotatedforbetteraccessandthensnap-lockedinopen position.



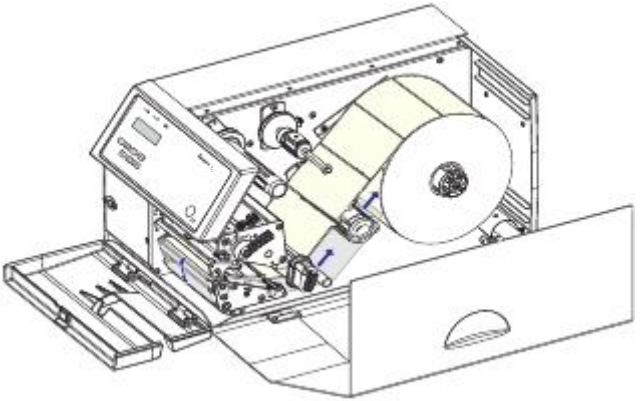
9Routethemediathroughtheprintunitandpushitinwards asfarasitwillgo.



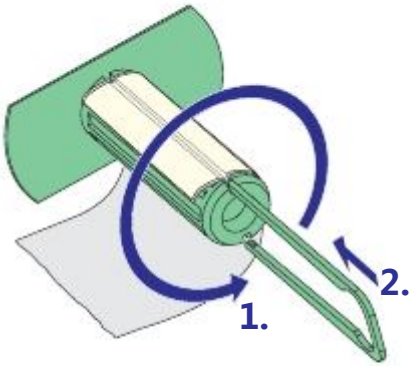
10Pulloutapproximately40cm(15in)oflabels.



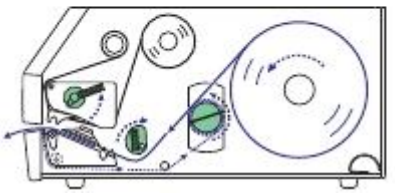
11 Route the labels around the guide plate and back under the print unit to the takeup hub



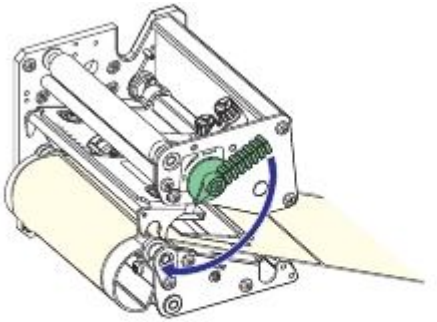
12 Wind up some of the media on the takeup hub (1) and secure it with the green clip (2).



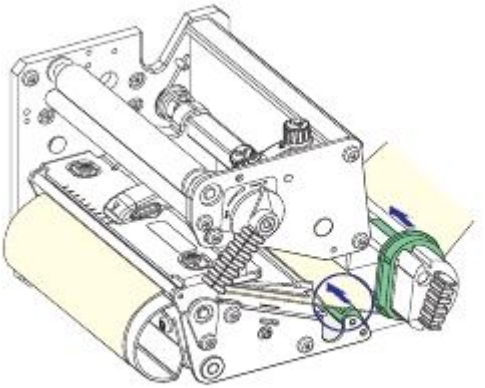
13 This diagram shows the path the media will take through the printer.



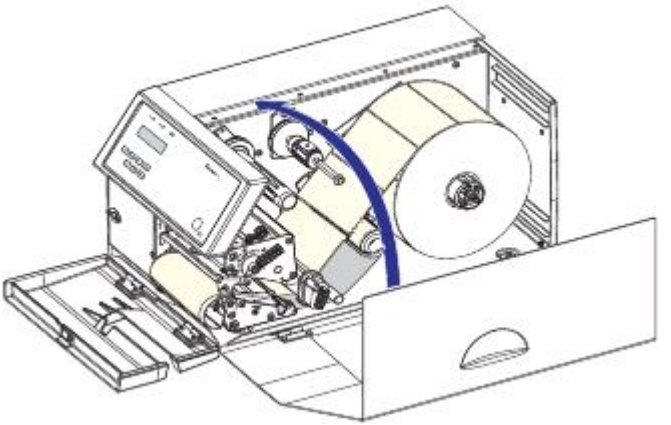
14Turntheprintheadliftlevertothe“closed”position.



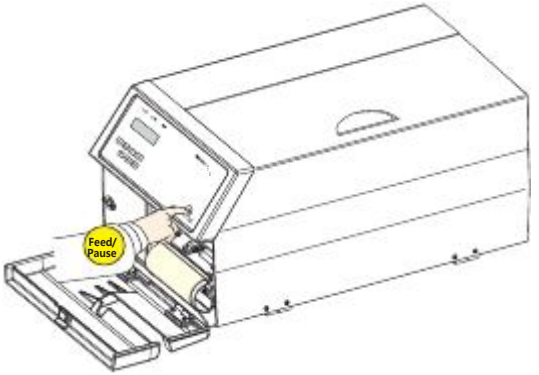
15Adjustthepositionofthegreenedgeguidessothatthemedia isguidedwithaminimumofplay.



16Closethesidedoor,butkeepthefrontdooropen.



17 Press **Feed/Pause** to advance the media and adjust the media feed.



External Supply (Fanfold)

This section describes the case when an external media supply is used such as a stack of fanfold tickets or an external media roll.

It is possible to simply let the media enter the printer through either of the two slots in the rear plate. However, we recommend the optional Intermec Fanfold Kit, which provides adjustable guides to more accurately guide the media into the printer. The Fanfold Kit can be fitted to either the upper or the lower slot in the rear plate.

When using an external media supply, take care to protect the media from dust, dirt, and other foreign particles that can impair the printout quality or cause unnecessary wear to the print head.

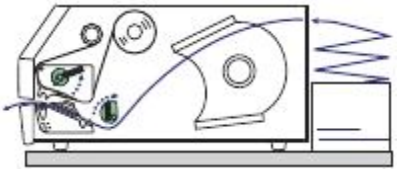
Depending on brand and quality, all direct thermal media are more or less sensitive to heat, direct sunlight, moisture, oil, plasticizers, fat, and other substances. Protect the media accordingly.

External supply can be used for:

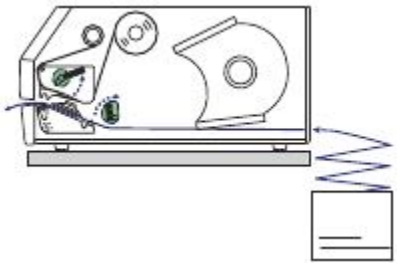
- Tear-off operation
- Cut-off operation
- Peel-off operation (upper slot only)
- Internal batch takeup operation

To load media for external supply operation

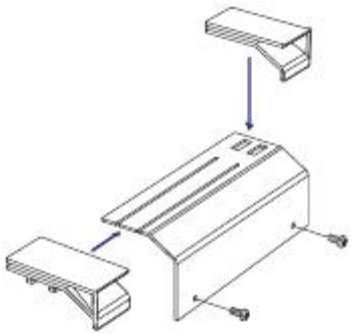
1 Use the upper slot in the rear plate when the supply is at the same level as the printer or when using peel-off operation.



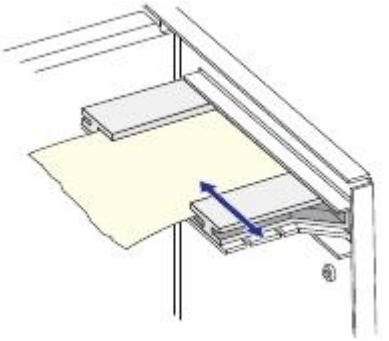
2 Use the lower slot in the rear plate when the supply is placed lower than the printer.



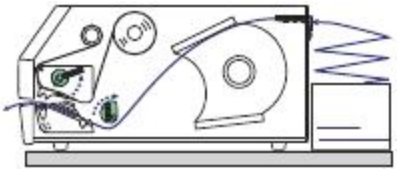
3 The printer can be fitted with an optional set of fan fold guides in either slot.



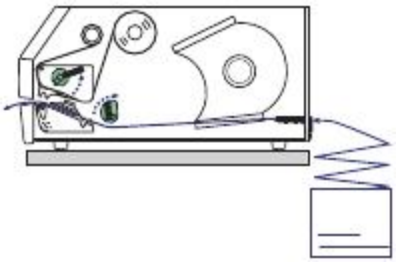
4Theouterguideisadjustableforvariousmediawidths.The minimumis40mm(1.58in).



5Fitthefanfoldguideintotheupperslotintherearplatewhen thesupplyisatthesamelevelastheprinterorwhenusing peel-offoperation.



6Fitthefanfoldguideintothelowerslotintherearplatewhen thesupplyisplacedlowerthantheprinter.



5 Loading Ribbon for Thermal Transfer Printing

Thischapterexplainshowtoloadtheprinterwithribbonfor thermaltransferprinting.

Loading Ribbon

TheEasyCoderPX4iprintercanprintonlabels,tickets,tags,and continuousstockusingeitherdirectthermalprintingonspecial heat-sensitivemediaorthermaltransferprintingusingaspecial ink-coatedribbon.

Thermaltransferprintingmakesitpossibletouseawiderangeof receivingfacematerialsandgivesadurableprintoutless vulnerabletofat,chemicals,heat,sunlightetc.thandirect thermalprinting.Makesuretoselectatypeofribbonthat matchesthetypeofreceivingfacematerialandtosetupthe printeraccordingly.

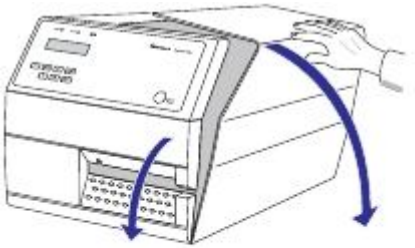
TheEasyCoderPX4iprintercanusetransferribbonrollswound withtheink-coatedsidefacingeitheroutwardorinward. Illustrationsinthismanualshowtheink-coatedsidefacing inward.

Ribbonisusuallyloadedinconnectionwithmedia replenishment,butloadedmediaisnotshownintheillustrations inthischapterinordertogiveaclearerviewoftheribbonpath. Formedialoadinstructions,see “LoadingMedia” onpage17.

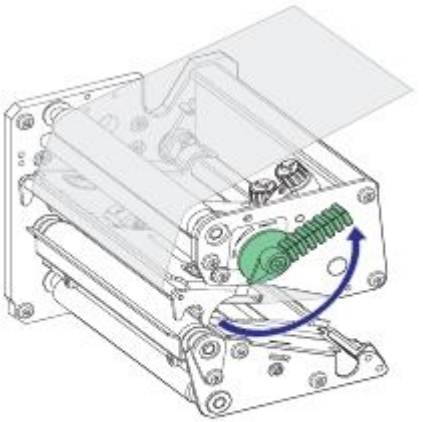
Mosttransferribbonsdonotsmearatroomtemperature.

To load ribbon for thermal transfer operation

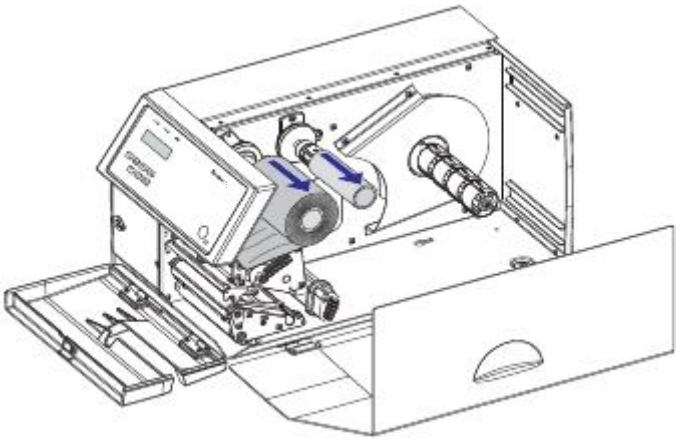
1Openthefrontandsidedoors.



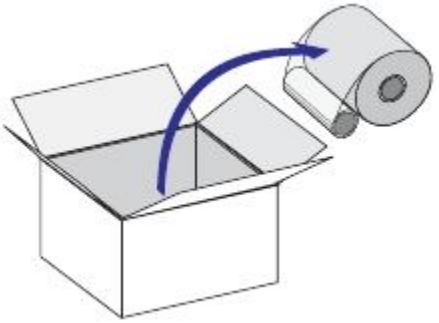
2Turntheprintheadliftlevercounterclockwisetoraisethe printhead.



3Removeanyusedribbonandtheemptyribboncore.

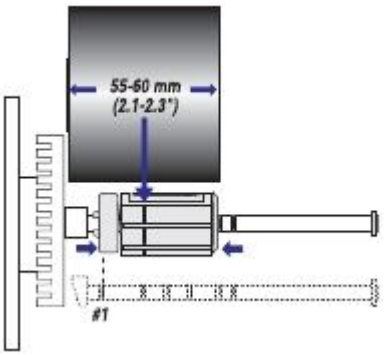


4Unpackarolloforiginal Intermecthermaltransferribbon.

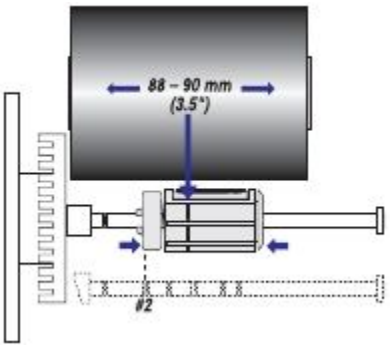


5Adjusttheribbonsupplybobbinforyourribbon:

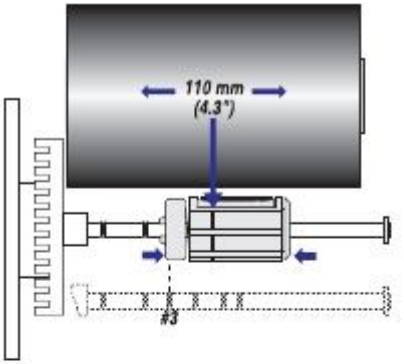
aIfyourribbonis55to60mm(2.16to2.3in)wide,compress theribbonsupplybobbinandmoveitsoitsnapsintothefirst (innermost)groove.



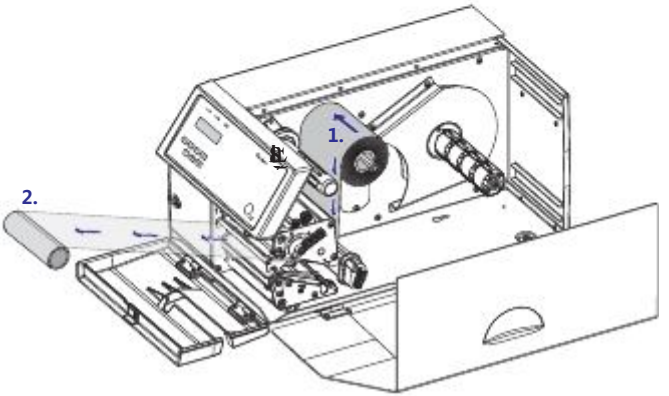
bIfyourribbonis88to90mm(3.5in)wide,compressthe ribbonsupplybobbinandmoveitsoitsnapsintothesecond groove.



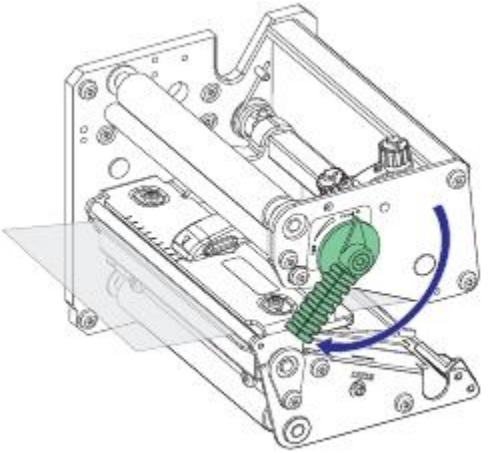
cIfyourribbonis110mm(4.3in)wide,compresstheribbon supplybobbinandmoveitsoitsnapsintothethird (outermost)groove.



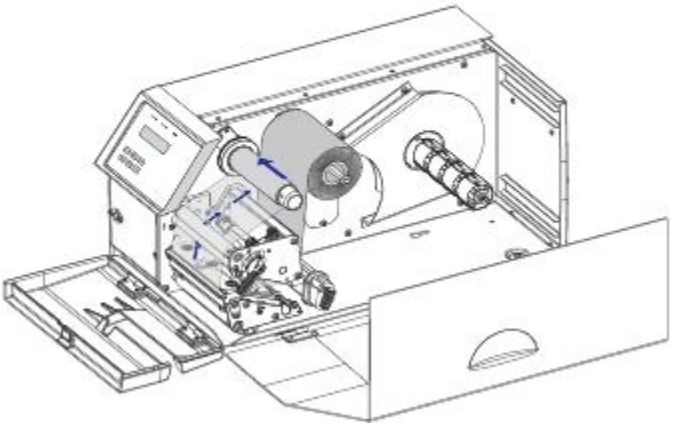
4Presstheribbonrollontotheribbonsupplybobbin(1)and routetheribbonthroughtheprintunit.Pullout20cm(8in) ofribbon.



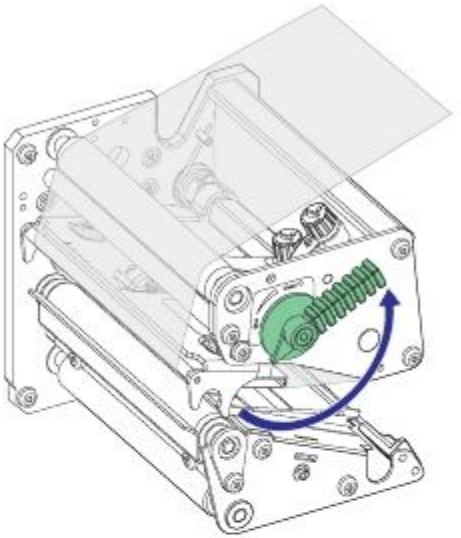
5Withoutreleasingtheribbon,turntheprintheadliftleverto "closed" positiontolocktheribbon.



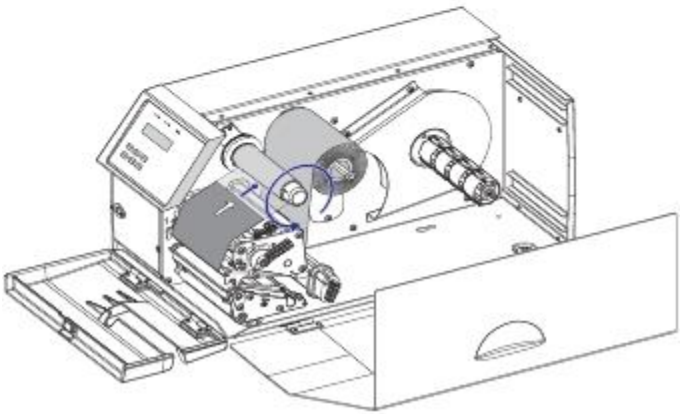
6Pressthecardboardcoreatthefrontendoftheribbononto therewindhub. Duringprinting, therewindhubwillrotate counterclockwise.



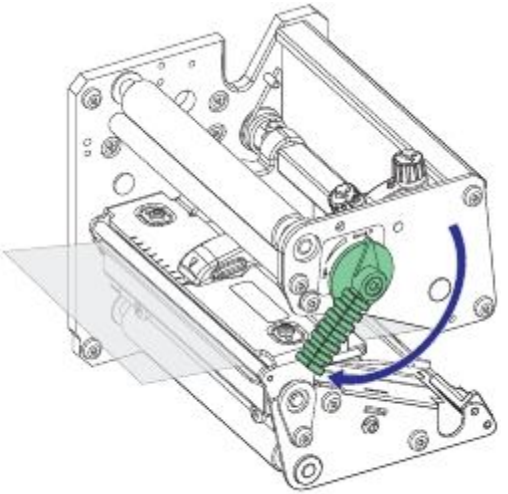
7Turntheprintheadliftlevertothe“open”position.



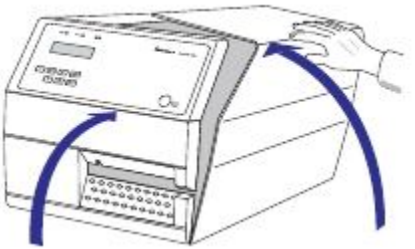
8Windupteribbonuntilallofthetransparentleaderhas passedtheprintheadandteribbonbecomestight.



9Turntheprintheadliftleverto“closed”position.



10Closethefrontandsidedoor.



6 Setting Up the Printer

Thischapterdescribesthevariousparametersthatareused duringSetupmodeorinthevariousapplicationprogramsto configuretheprinterfortheuser’sspecificrequirements.Itcovers thefollowingtopics:

- Description
- DefaultSetup
- Setupparametersforcommunication,test/service,media,and configuration.

Whenmeasurementsarespecifiedas“dots”,theactuallengthin millimetersorinchesdependsontheprintheaddensity.Convert asfollows:

8dots/mm(203dots/inch)printhead:

1dot=0.125mm=0.0049in(4.9mils)

16dots/mm(406dots/inch)printhead:

1dot=0.0625mm=0.00246in(2.46mils)

Description

Thesetupcontrolstheprinterinregardofserialcommunication, testandserviceoperations,andspecifieswhichtypesofmedia andribbonareloadedintheprinter.

Checkthelistbelowtoseeiftheprinter’ sdefaultsetupmatches yourrequirements.Ifnot,youwillhavetochangethesetup.To entertheSetupMode,press**Setup**ontheprinter’ s built-inkeyboardandfollowtheinstructionsin “SetupMode” onpage67.

Default Setup

Theprinter’sdefaultsetupislistedbelow,withnooptions included.

Ser-Com
Baudrate
Databits
Parity
Stopbits

Test/Service
Testprint
Datadump
Memoryreset
LSSTest

Media
Labellength
Mediatype
Papertype
Sensitivity
Darkness
Labelrestpoint
FormadjdotsX
FormadjdotsY
Ribbonlow
Paperlow

Configuration
Emulation
Cutter

Configuration
Labeltakensensor
Printspeed

Setup Parameters

Serial Communication

Theserialcommunicationparameterscontrolthe communicationbetweentheprinterandtheconnectedcomputer orotherdevicesontheserialport.

Note:Theserialcommunicationparametershavenoeffecton parallelorEasyLANcommunications.

Makesuretheprinter’scommunicationparametersmatchthe setupoftheconnecteddeviceorviceversa.Ifthesetupofthe printerandthesetupofthehostdonotmatch,theresponsefrom theprintertohostwillbegarbled.

Baud Rate

Thebaudrateisthetransmissionspeedinbitspersecond.There are8options:

- 1200
- 2400
- 4800
- 9600(default)
- 19200
- 38400
- 57600
- 115200

Data Bits

Databitsspecifiesthenumberofbitsthatwilldefineacharacter.

- 7CharactersASCII000to127decimal
- 8CharactersASCII000to255decimal(default)

Parity

Theparitydecideshowthefirmwarewillcheckfortransmission errors.Therearefouroptions:

- None(default)
- Even
- Odd
- Space

Stop Bits

Thenumberofstopbitsspecifieshowmanybitswilldefinethe endofacharacter.Therearetwooptions:

- 1(default)
- 2

Protocol

XON/XOFF (default)

IntheXON/XOFFprotocol,dataflowcontrolisachievedby usingXON(DC1)andXOFF(DC3)characters.Messageblocks arenotrequiredtobebracketedbytheStartofText(STX)and EndofText(ETX)characters.However,atpoweruporaftera resetallcharactersexceptENQorVTwillbeignoreduntilan STXisdetected.Themessagelengthinthisprotocolis unrestricted.Thatis,theprinterprocessesinformationasitis beingdownloadedandstopswhenthereisnomoreinformation.

XON/XOFFprotocolconformstogenerallyacceptedindustry standards.Noend-of-messageresponseissenttothehostother thanXOFF.AnXONwillbesentonpowerup.

SinceDC1andDC3areusedfordataflowcontrol,theprinter statuscharactersaredifferentthanthoseoftheStandard Protocol.Ifthehostignorestheprinter’sXOFF,theprinterwill resendanXOFFafterreceivingevery15charactersfromthehost.

Condition
Bufferalreadyfull
Printheadraised
Ribbonfault
Nolabelstock
Buffernowfull
Printheadhot
Labelatstrippin
Labelskipping
Printing

Intermec Standard Protocol

TheIntermecPrinterStandardProtocolisahalf-duplexprotocol. Alldatatransmissionstotheprinterconsistofstatusinquiry (ENQ),statusdump(VT),ormessageblocks.Eachmessage blockstartswiththeStartofText(STX)characterandendswith theEndofText(ETX)character.Eachmessageblockmustbe 255charactersorless,includingtheSTXandETXcharacters. Theprinterrespondstoeachstatusinquiryormessageblock withtheprinterstatus.Thehostshouldchecktheprinterstatus beforedownloadingamessageblocktotheprinter.ENQcauses theprintertotransmititshighestprioritystatus,whileVT instructstheprintertotransmitallstatusthatappliesintheorder oftheirpriority.Thepossibleprinterstatus,indescending priority,is:

Condition
Bufferalreadyfull
Printheadraised
Ribbonfault
Nolabelstock
Buffernowfull
Printheadhot
Labelatstrippin
Labelskipping
Ready
Printing

Test/Service

Testprint

ThispartoftheSetupModeallowsyoutoprintvarioustypesof testlabels.Gotothedesiredoptionandpress**Enter**.Theprinter willstartprintingthetestlabelorlabels.Press**Feed/Pause**to holdtheprintingtemporarily.Toresumeprinting,press**Feed/ Pause**again.Thefollowingoptionsareavailable:

Configuration

Choosesoftware(SW),hardware(HW),ornetwork.

TheSoftwareConfigurationLabelcontains:

- Currentconfigurationparametersstoredintheprinter’s memory
- Definedpages
- Definedformats
- Definedgraphics
- Definedfonts
- Anyinstalledprinteroptions

TheHardwareConfigurationLabelcontains:

- Printermemoryinformation
- Printermileage
- Printheadsettings
- Firmwarechecksum,program,andversionnumber

TheNetworkConfigurationLabelcontains:

- WINSName
- MACAddress
- IPSelection
- IPAddress
- Netmask
- DefaultRouter
- NameServer

- MailServer
- PrimaryWINSServer
- SecondaryWINSServer
- NetworkStatistics

Test Labels

Thisoptionhastwochoices,PitchandPrintQuality.

- ThePitchlabelcontainsanevenpatternofsmalldotsthat revealsfailingprintheaddotsandvariationsofprintout darknessbecauseofunevenprintheadpressureorbadenergy regulationtotheprinthead.
- ThePrintQualitylabelcontainsnumberofbarcodeswith differentcharacteristicsandusefulinformationonprinter model,programversion,printspeed,andmediasensitivity setup.

Format

TheFormatLabelcontainsasingleformatthatyoucanuseto evaluatetheprintqualityofaparticularformat.Thisoption printslabelsforalltheformatsstoredintheprinter' smemory.

Page

ThePageLabelteststheabilityoftheprintertoreceiveandprint singleormultiplepagesoflabeldatathatissentfromthehost. Thisoptionprintslabelsforallthepagesstoredintheprinter' s memory.

UDC

TheUDCLabelteststheabilityoftheprintertoreceiveand printsingleormultipleuser-definedcharacters(bitmapgraphics) thataresentfromthehost.Thisoptionprintslabelsforallthe UDCsstoredintheprinter' smemory.

Font

TheFontLabelcontainsallthecharactersinasinglefont.This optionprintslabelsforalltheuser-definedfonts(UDF)storedin theprinter' smemory.

Data Dump

If data dump is enabled by selecting the "Yes" option, the printer prints all data and protocol characters received on the serial port. An ASCII and hexadecimal representation of each character is printed.

Memory Reset

There are two options. The memory will be reset to factory default as soon as an option has been selected and Enter is pressed. Select between "All", which resets the entire memory, and "Configuration", which just resets the configuration part of the memory.

LSS Test

For description, see "LabelStopSensor" on page 104.

Media

The media parameters tell the firmware the characteristics of the media that will be used, so the printout will be positioned correctly and get the best quality possible.

Media Type

The MediaType parameters control how the label stop sensor (LSS) and the media feed work. There are three media type options:

- Gap is used for adhesive labels mounted on liner (backing paper) or continuous paper stock with detections lots. Default.
- Mark is used for labels, tickets, or strip provided with black marks at the back.
- Continuous is used for continuous stock without any detections lots or black marks.

Paper Type

The PaperType parameters control how the transfer ribbon mechanism and the ribbon sensor work. There are two paper type options:

- DT (Direct Thermal) is used for heat-sensitive media without any need for a thermal transfer ribbon. Default.
- TTR (Thermal Transfer) is used for non heat-sensitive receiving face materials in combination with a thermal transfer ribbon.

Label Length Dots

TheLabelLengthsetupspecifiesthelengthindotsofeachcopy alongthemediafeeddirection(X-coordinate).Thisisusedfor “label-out” detection.

Sensitivity (Media Sensitivity Number)

Thissetupparameterspecifiesthecharacteristicsofthedirect thermalmediaorcombinationofreceivingfacematerialand thermaltransferribbon,sotheprinter’sfirmwarecanoptimize theheatingoftheprintheadandtheprintspeed.Themedia sensitivitynumbercanbechangedusingPrintSet,third-party software,oranIPLcommand(<SI>gn[,m]).See “Media SensitivityNumber” onpage129formoreinformation regardingthemediasensitivitynumber.

Darkness

Usethisparametertomakeminoradjustmentsoftheblackness intheprintout,forexampletoadapttheprintertovariationsin qualitybetweendifferentbatchesofthesamemediaquality.The valuecanbesetwithintherange-10%to+10%where-10isthe lightestand10isthedarkest.Defaultvalueis0%.

Label Rest Point

Specifieswherelabelsstopforremoval.Usethisforpeel-off(self-strip)applications.Allowedrangeis-30(furthestback)to30 (furthestforward).Defaultis0.AlsoavailableasanIPL command(<SI>fn).

Form Adj Dots X

SpecifieswheretheX-positionoftheoriginshouldbeplacedon thelabel.Allowedrangeis-30(closesttotheleadingedge)to30 (furthestfromtheleadingedge).Defaultis0.

Form Adj Dots Y

SpecifieswheretheY-positionoftheoriginshouldbeplacedon thelabel.Allowedrangeis-30(closesttothecentersection)to30 (furthestfromthecentersection).Defaultis0.

Ribbon Low

Specifiesthevalueinmillimetersoftheribbonsupplyrollforthe ribbonsensor.Whenthediameterofremainingribbonsupply rollreachesthesetvalue,anSNMPtrapissenttotheprinter’s homepage,providedtheprinterhasanoptionalEasyLAN connection.Range:0-80withpresetvaluesatanintervalof5.A valuelargerthan80setstheribbonsensorto0.Defaultvalue:0.

Theribbonlowsensorcanalsobesetusinganipl command:
<STX><SI>kn<ETX>

Paper Low

Specifiesthediameterinmillimetersofthemediasupplyrollfor thepapersensor.Whenthediameterofremainingmediasupply reachesthesetvalue,anSNMPtrapissenttotheprinter's home page,providedtheprinterhasanoptionalEasyLANconnection. Range:0-150withpresetvaluesatanintervalof10.Avalue largerthan150setsthepapersensorto0.Defaultvalue:0.

Theribbonlowsensorcanalsobesetusinganipl command:
<STX><SI>jn<ETX>

Configuration

Power Up Emulation

Theemulationmodeletsyouprintbarcodelabelsthatwere originallydesignedonan86XXprinterinmultiplesof10or15 mil.Whentheprinterisworkinginemulationmode,notallIPL commandsaresupported.Foracompletelistofcommands availableduringemulationmode,seethelatestversionofthe*IPL ProgrammingReferenceManual*(P/N066396-xxx).

Toreturnfromemulationmode,selectemulation "none" (default).

Print Speed

Youcanselecttheprintspeedfrom4in/sec(100mm/sec)to12 in/sec(300mm/sec)withanintervalof1in/sec.Thehigherthe printspeed,themorewearontheprinthead,sodonotusea higherprintspeedthannecessary.Somedirectthermalmediaor ribbon/mediacombinationsmaynotallowthehighest alternativeswithouttheprintoutqualitybeingadverselyaffected.

Cutter (option)

Bydefault, "NotInstalled" isdisplayed.Ifacutterisinstalled, youmustmanuallyindicatethatconditiontothefirmwareby selectingeither "Enable" or "Disable." Onceyouhavedonethat, youcanalsouseIPLcommandstoenableordisablethecutter:

<STX>R<ETX>enterprint/configurationmode

<STX>c0<ETX>Disablecutter

<STX>c1<ETX>Enablecutter

Label Taken Sensor (option)

Tomaketheprinterworkinself-stripmode,thatis,waitingfora labeltoberemovedbeforethenextlabelisprinted,theself-strip modemustbeenabled.Thiscanalsobedonebyexecutingthe followingcommands:

<STX>R<ETX>enterprint/configurationmode

<STX><SI>t0<ETX>Disableself-strip

<STX><SI>t1<ETX>Enableself-strip

Ifthelabeltakensensordoesnotworkproperly,thesensitivity canbecalibratedintheSetupMode.Select “LTSCalibration” andfollowtheinstructionsinthedisplay.Makesurethatno directsunlightorinteriorlightinginterfereswiththelabeltaken sensor.

Returning to Factory Default Setup

Therearethreewaystoreturnto thefactorydefaultsetupofthe printer:

- InsertaspecialCompactFlashmemorycardandrestartthe printer.
- UsetheMemoryResetoptionintheTest/Servicepartofthe SetupMode.
- Usetheprinter’sbuilt-inkeyboard.

To return to factory default setup using the keyboard

1 Lifttheprinthead.

2 Switchonthepowertotheprinterandpress**i**andwaituntil theprinterbeeps.

Quicklypressthefollowingkeys:

,

3 Thefollowingmessagewillbedisplayed:

```
Factory Default?
Enter=Yes ESC=No
```

4 Within 10 seconds, press **Enter** to reset the printer to factory default. The parameters will be reset and the printer will continue the normal startup.

If you press
passed, the normal startup process will continue without any reset being performed.

- **Note:** Resetting to the factory default will reset all files used to store settings, but it does not affect settings that were already loaded before the files were removed. This means that, for example, EasyLAN Wireless settings (SSID, keys, etc.) retain their values until the next reboot. To reload all settings, simply reboot after performing a reset.

7 Setup Mode

Thischapterdescribeshowtonavigateinthesetupmode,and providesoverviewsoftheSetupMode.

Navigating in Setup Mode

EntertheSetupModebypressing**Setup**ontheprinter’sfront panel.Textinthedisplayguideyouthroughthesetupprocedure. Usetheprinter’skeyboardtonavigatemenus,acknowledge displayedvalues,orselectorenternewvalues.

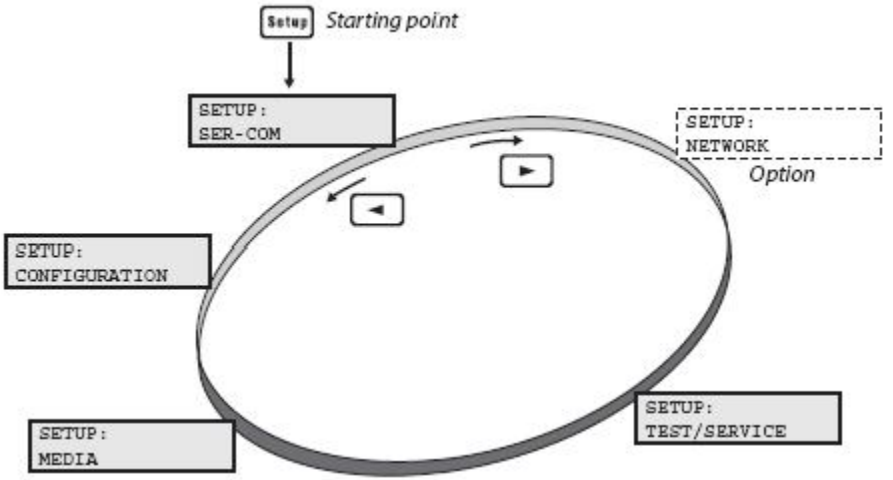
Note: Anexternalkeyboardcannotbeusedinsidethe Setup Mode.

Keyboard Buttons for Setup Mode

Button	
◄	Moveonestepbackonthesamelevel.
ESC ▲	Moveuponelevelandescapewithoutchanging thesetting.
►	Moveforwardonthesamelevel.
▼	Movedownonelevel.
Enter	Acknowledgeandmovetonextmenu.
Setup	ExittheSetupMode.Canbeusedanywherein SetupMode.

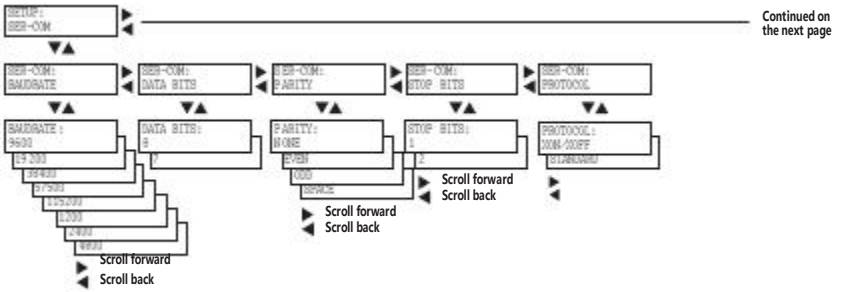
TheSetupModeisorganizedasanendlessloopwithanumber ofsub-categories.Atstartup,thefirmwaredeterminesifan EasyLANinterfaceboardisinstalledintheprinter.Ifso,the Networksetupmenusareshownin the SetupMode.

Thediagramonthenextpageshowstheoptionsinthemain loop.Detailedoverviewsareshownonthefollowingpages.



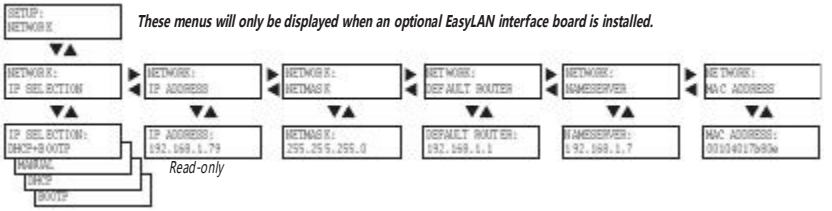
Setup Modes

Serial Communication

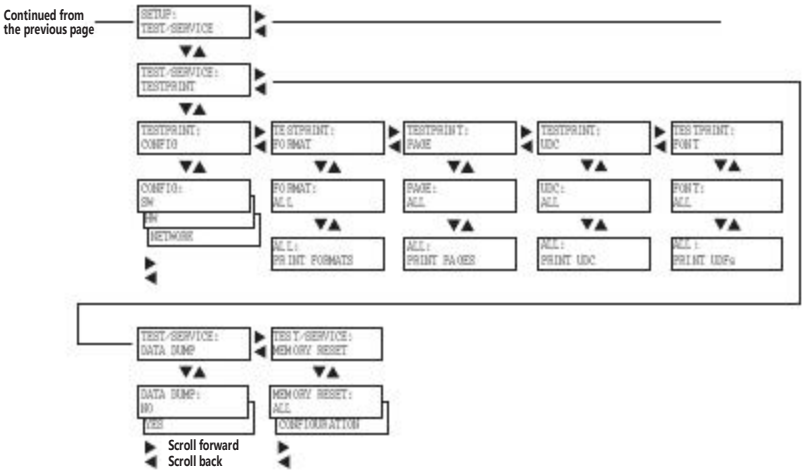


Legend:
Dottedboxesandlinesindicateoptions.
Thickboxesindicatesdefaultoptions.
Values inside brackets indicate default settings.

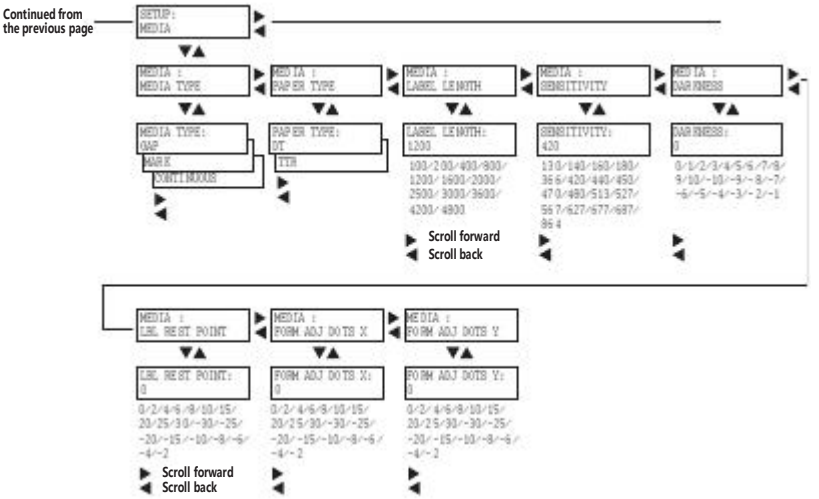
Network (Option)



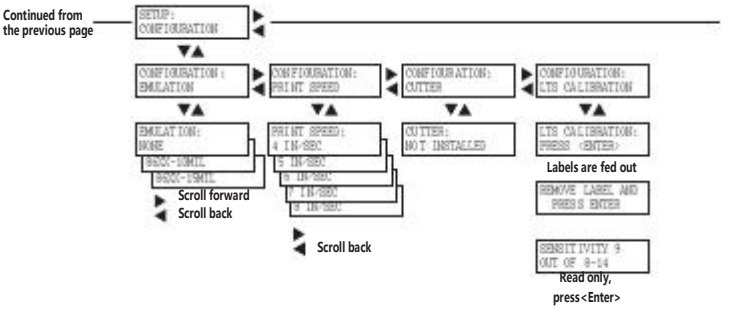
Test/Service



Media



Configuration

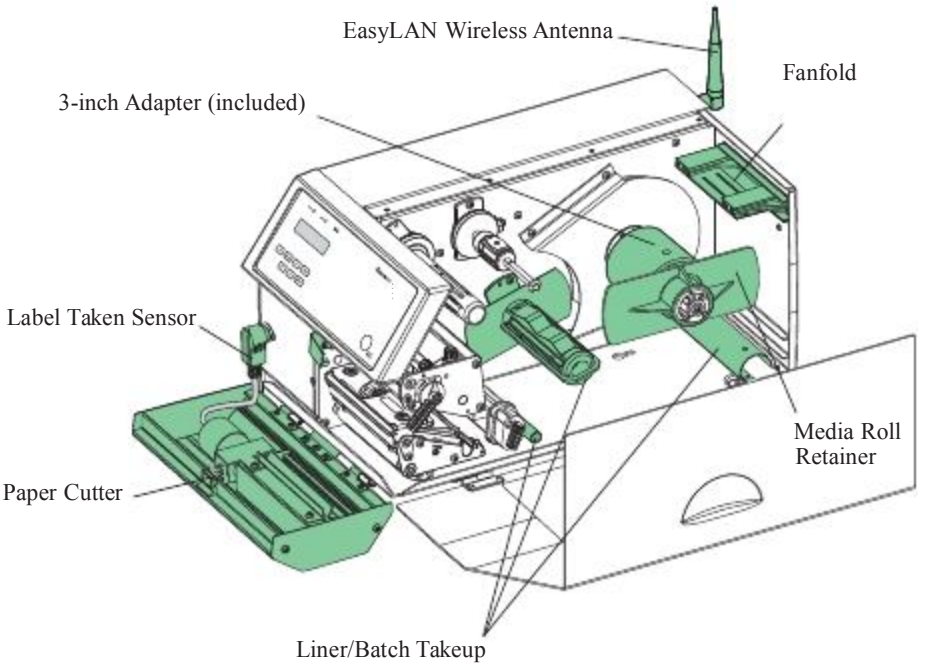


8 Options

This chapter describes the options available for the EasyCoder PX4i printer. The options can be factory installed, field-installed by an authorized service technician, or in some cases installed by the operator.

Introduction

TheEasyCoderPX4iprinterprovidesahighdegreeofflexibility becauseithasamodulardesign.Byaddingoptionstothebasic printer,theEasyCoderPX4iprintercanbeadaptedforavariety ofapplications.Someoptionsshouldbeinstalledbyan authorizedservicetechnicianorareonlyavailableas factory-installedoptions.



PX4i options

Liner/Batch Takeup Kit

Thisisafactory-installedoptiononlyandisusedtoseparate labelsfromthelinerandwindupthespentlinerinsidethe printer’ smediacompartment.Labels,tickets,tags,etc.canbe woundupinsidethemediacompartmentafterprintingbyfitting aspecialguidetothefrontoftheprintunit.

Thekitconsistsofasteppermotorthatdrivesthelinerdrive rollerintheprintunit(fittedasstandard)andatakeuphubin themediacompartment.Aguideshaftisfittedtothecenter sectionimmediatelybehindtheslackabsorber.Aguideplateis fittedattherearofthemediacompartmentandcanbeusedto replacethestandardtearbarontheprintunitforbatchtakeup operation.

Operationandmedialoadaredescribedin “Peel-Off(Self-Strip)” onpage28and “InternalBatchTakeup(Roll-to-Roll)” onpage34.

Paper Cutter

TheEasyCoderPX4iprintercaneasilybefittedwithanoptional papercutter.Thecutterunitreplacesthefrontdoororthelabel takensensor(LTS),ifoneisequipped.Itisconnectedbyasingle cabletotheDIN-connectorontheprinter’ sfront.Thepaper cutterisavailablebothasafactory-installedoptionandasa operator-installablekit.

Thepapercutterincreasestheprinter’ stotalweightby approximately1.0kg(2.2lb)anditslengthby28mm(1.1in).

Thepapercutterisintendedtocutthroughcontinuousnon-adhesivepaper-basedmediaorthroughthelinerbetweenlabels. Itmustnotcutthroughanyadhesive,whichwouldsticktothe cuttingpartsandrapidlyrenderthecutterinoperable－possibly alsocausingdamagetotheelectricmotor.Maximumthickness fornormalpaper-basedmaterialsis175μm(≈175grams/m2).

Thepapercuttercanbetiltedforwardinordertofacilitate cleaningandmediaload.Formedialoadinstructions,see “Cut-Off” onpage23.”

Shouldyouinadvertentlycutthroughself-adhesivelabels,you willhavetocleanthecuttingparts.Tiltthecutterunitdownand wipeitusingapieceoftissuemoistenedwithisopropylalcohol.

Thecuttingedgewillrotatewhenthepowerisswitchedon andwhentheprinterisre-booted.Alwayskeepthecutterin closedpositionduringoperation.Switchoffthepoweror disconnectthecutterbeforecleaning.Keepyourfingersaway fromcuttingedges!

- **Note:**ThecuttermustbeenabledduringConfigurationinSetup Mode.Formoreinformation,see “Cutter(option)” onpage63 and “Configuration” onpage71.

Fanfold Guides

Thefanfoldguidesprovidemoreexactroutingofthemedia whenthesupplyisplacedoutsidethemediacompartment,such asastackoffanfoldedtickets.Theguidescomeasanoperator-installablekitwithinstallationinstructions.Theguidescanbe fittedintheupperorlowerslotintherearplate.

Instructionsforloadingthemediaareincludedinthesection “ExternalSupply(Fanfold)” onpage41.

Media Roll Retainer

Themediarollretainerisintendedforapplicationswherethe mediamaybecomemisalignedonthemediasupplyhub.The plasticwing-shapedretainerissimplyslippedontothemedia supplyhuboutsidethemediarollbytheoperator.Notoolsare required.

3-inch Adapter

The3in/76mmadapterisincludedinthepackageandmakesit possibletousemediarollswith3in/76mminnerdiameter cardboardcores.

Theadapterispressedontothemediasupplyhubandheldin placebyascrew.Whenfittingtheadapters,makesurethatthe screwhitsaroundedplasticsurface,notametalleafspring. Illustrationsofhowtoloadthemediausingtheadaptercanbe foundin “LoadingMedia” onpage17.

Label Taken Sensor

TheLabelTakenSensor(LTS)isaphotoelectricsensorfittedto thecentersectioninsidethefrontdoor.Itallowstheprinter’s firmwaretodetectifthelatestprintedlabel,ticket,tagetc.has beenremovedbeforeprintinganothercopy.

Thelabeltakensensorisusuallyfactory-fitted,butisalso availableasakitforinstallationbyanauthorizedservice technician.Itcannotbefittedincombinationwithapaper cutter.

Interface Boards

Anumberofinterfaceboardsareavailableforusewiththe EasyCoderPX4iprinter.Theinterfaceboardsareeitherfactory-fittedorcaneasilybefittedbyanauthorizedservicetechnician.

TheEasyCoderPX4iprintercanaccommodateoneEasyLAN interfaceboardplusoneotherinterfaceboard.

EasyLANboards:

- EasyLANEthernetinterface
- EasyLANWirelessinterface

Othercommunicationboards:

- ParallelInterfaceBoard(IEEE1284)

9 Troubleshooting

ThischapterdescribeshowtheIntermecReady-to-Work indicatorandotherindicatorswork.Italsolistsvariouspossible casesofinferiorprintoutquality,describespossiblecauses,and suggestsremedies.

Intermec Ready-to-Work Indicator

Thereadinessoftheprinter,individuallyorasapartofa solution,isindicatedbytheblueIntermecReady-to-Work indicator.

Iftheindicatorblinksorisswitchedoff,theprinterisnotready. Furtherinformationcanbeobtainedinthedisplaywindowby pressing**i**.Incaseofseveralerrorsorsimilarconditionsoccurring simultaneously,onlythemostsignificanterrorisdisplayed.Once thiserrorhasbeencleared,nextremainingerrorisdisplayed.

Providedtheprinterisconnectedtoanetwork,allconditions thatpreventsprintingarereportedtotheEasyADCConsole. TheEasyADCConsoleisaPC-basedsoftwarewhichallowsa supervisortomonitorallconnecteddevicesthathavean IntermecReady-to-Workindicator,includinghandheld computers,accesspoints,andprinters.

Display Messages and LED Indications

Error/Event
Operational
Outofpaper
Outoftransferribbon
Transferribbonis installed
Headlifted
Cuttererror1
Cuttererror2
Cuttererror3
Lsstoohigh
Lsstoolow
Testfeednotdone
Pressfeednotdone
Pausemodeentered
Setupmodeentered
IPlinkerror
IPconfigurationerrorBlink
Printheadnotfound
Rebooted
Initializing
Printercrash
Printerturnedoff
Maintenance

Display Messages and LED Indications

Error/Event	
Powersupplyover temperature	
Printheadhot	HOT

Note1:Thisisonlyapplicableforprintersequippedwithan EasyLANinterface.

Note2:Aprinterthatisequippedwithan EasyLANinterface,butisnotconnectedtoa network,willhaveablinkingRTW.Toavoidthis,theusercanset “IPSELECTION” to “MANUAL” and “IPADDRESS” to “0.0.0.0”.Thiswillindicatethattheuserdoesnotregard thelackofnetworkconnectionasanerror.

Note3:Notrapcanbesentwhenthiserror/eventoccurs.

Note4:Thiserrorindicatesthattheprinterhasnotreceivedan IPaddress.Itisonlyapplicable forprinterswithIPSELECTIONsettoDHCPand/orBOOTP.

Note5:Atmost,butnotall,printercrashes,theconsoleisreset.ThiswillmaketheRTWgo off.

Note6:Iftheprintheadtemperatureraisesabove100° C(212° F),anerroroccursand theprintingwillbepauseduntiltheprintheadhascooledoff.Meanwhile,theprinteris abletoreceivecommandsanddatauntilthebufferisfilled.Theprintingis automaticallyresumedwhentheprintheadtemperaturehasreached85° C(185° F).

Troubleshooting

Overall Weak Printout

Possible Cause
Wrongmediagrade
Contrastvaluetoo low
Printheadpressure toolow
Wornprinthead
Wrongprinthead
voltage

Printout Weaker On One Side

Possible Cause
Unevenprinthead pressure

Weak Spots

Possible Cause
ForeignparticlesonCleanorreplace media
Media/ribbondon’ tChangetomatching match
Poormediaor ribbonquality
Wornprinthead
Wornplatenroller

Overall Dark Printout

Possible Cause

Wrongmediagrade	
Contrastvaluetoo high	
Printheadpressure toohigh	
Wrongprinthead voltage	

Excessive Bleeding

Possible Cause

Wrongmediagrade	
Contrastvaluetoo high	
PrintheadpressuretooAdjustpressure high	
FaultyenergycontrolReplace CPU board	

Dark Lines Along Media Path

Possible Cause

Foreignobjectson printhead	page88

White Vertical Lines

Possible Cause

Printheaddirty	

Large Part Of Dot Line Missing

Possible Cause
Failingprinthead
Failingstrobesignal

Printout Missing Along Inner Edge

Possible Cause
Badmediaalignment
Usingsmallcorewith supplypostinupper position.
X-startparametervalue toolow

Transfer Ribbon Breaks

Possible Cause
Ribbonnotfitted correctly
WrongmediagradeChangeparameter,then cleanprinthead
Badenergycontrol

Transfer Ribbon Wrinkles

Possible Cause
FaultyribbonbreakshaftAdjust adjustment
Incorrectedgeguide adjustment
Printheadpressuretoo strong

No Thermal Transfer Printout

Possible Cause
Ink-coatedsideofribbonReloadribbon isnotfacingmedia

Media Feed Not Working Properly

Possible Cause	
Changedmedia characteristics	
Wronglabelrest parameter	
WrongMediaType parameter	
WrongLSSposition	
Dirtysensors	LabelStopSensor” onpage93
LooseormissingadapterReplaceandtightenset screw	“Tear-Off
Faultysensors	

Compressed Text Or Bar Code

Possible Cause
ToohighprintspeedforReduceprintspeed largemediaroll

10 Maintaining the Printer

This chapter describes how the operator can maintain the printer. Regular maintenance is important for the print out quality and for the life of the printhead. The chapter covers the following topics:

- Printhead Cleaning
- External Cleaning
- Cleaning the Label Stop Sensor
- Replacing the Printhead
- Media Jams

When cleaning or replacing the printhead, take precautions to avoid electrostatic discharges.

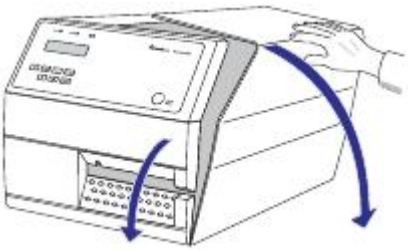
Printhead Cleaning

Cleaningtheprintheadonaregularbasisisimportantforthelife oftheprintheadandfortheprintoutquality.Youshouldclean theprintheadeachtimeyoureplacethemedia.Thissection describeshowtocleantheprintheadusingcleaningcards.If additionalcleaningisrequired,forexampleremovingadhesive residuefromtheplatenrolleroртearbar,useacottonswab moistenedwithisopropylalcohol.

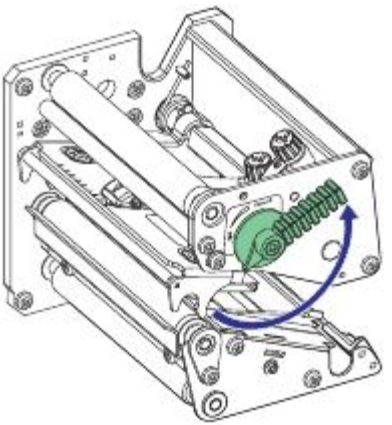
Isopropylalcohol[(CH-3)2CHOH;CAS67-63-0]isahighly flammable,moderatelytoxic,andmildlyirritatingsubstance.

To clean the printhead

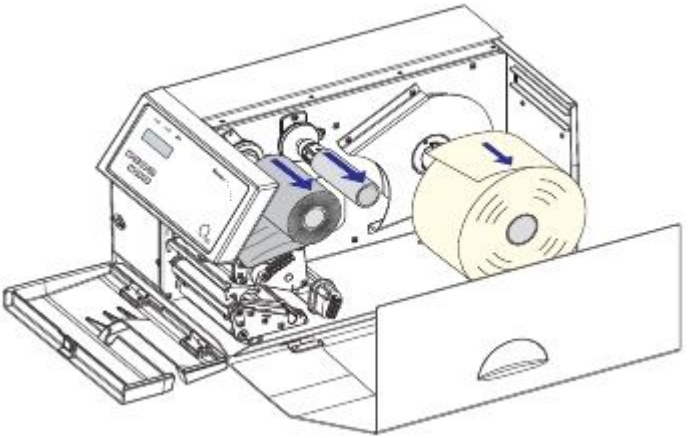
1Openthefrontandsidedoors.



2Turntheprintheadliftlevercounterclockwisetoraisethe printhead.

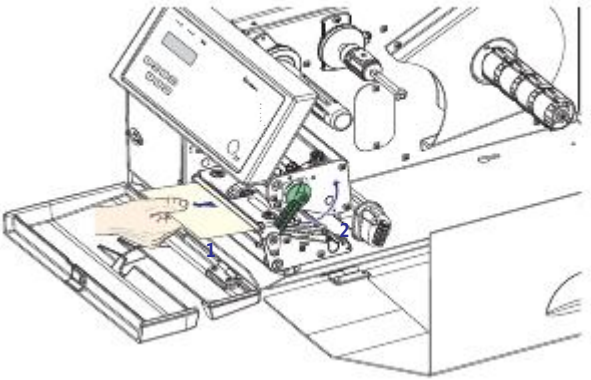


3Removeanymediaandtransferribbon.

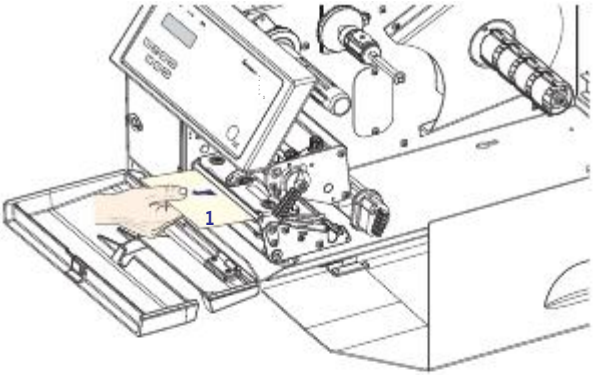


4Openthecleaningcardenvelopeandpulloutthecleaning card.Readthewarningtext.

5Insertmostofthecleaningcardundertheprinthead(1). Engagetheprinthead(2).

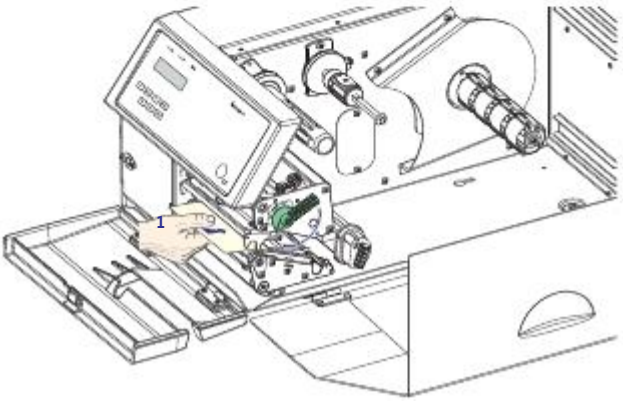


6Pullouttthecleaningcard(1)andraisetheprinthead(2).

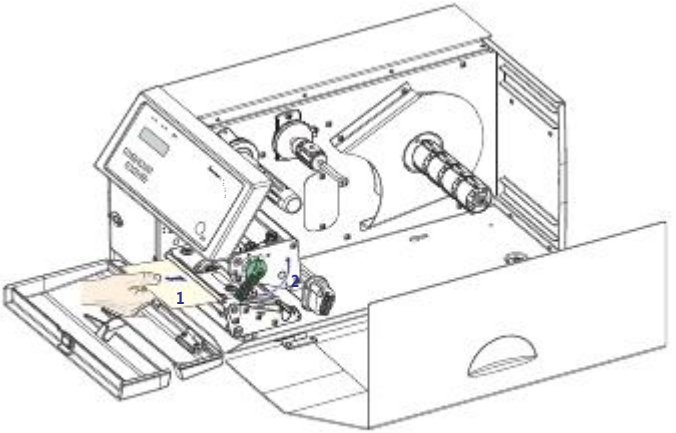


7Waitforapproximately30secondstoallowthecleaningfluid todissolvetheresidue.

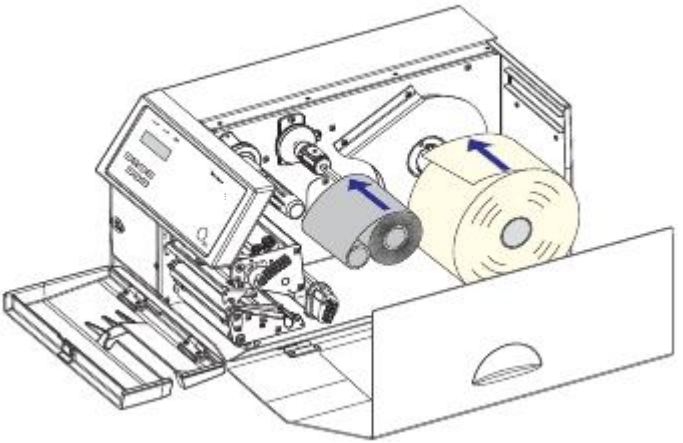
8Insertmostofthecleaningcardundertheprintheadagain (1).Engagetheprinthead(2).



9 Pull out the cleaning card. If necessary, repeat the process with a fresh cleaning card.



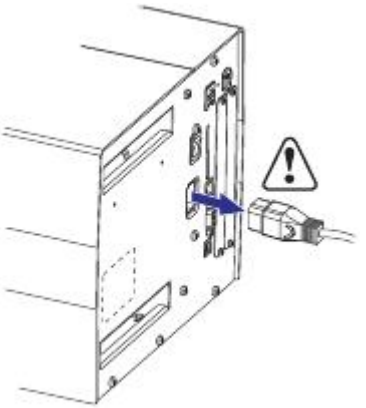
10 Allow the cleaned parts to dry completely before loading any media and ribbon.



External Cleaning

To clean the exterior of the printer

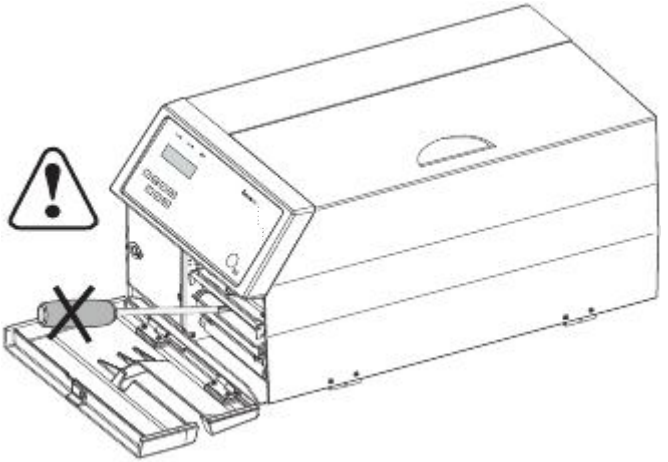
1Alwaysremovethepowercordbeforecleaning!



2Wipeexternalsurfaceswithasoftclothslightlymoistened withwateroramilddetergent.

Neverspraytheprinter.Protectitfromwaterwhencleaningthe premises.

Neveruseanysharptoolsforremovingstucklabels. The printheadandrollersaredelicate.



Cleaning the Label Stop Sensor

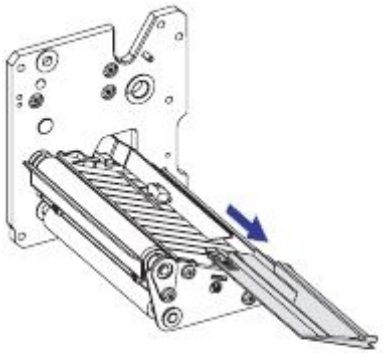
Thelabelstopsensor, whichcontrolsthemediafeed, ispartially enclosedbytwoplasticguides. Lightpassesthroughslots betweentheupperandlowerpartofthesensor. Iftheguidesare notclean, stucklabelsorotherobjectsmayblockthelightbeam.

Iftheprinterstartstofeedoutlabelsinanunexpectedway, removetheguidesasdescribedbelowandcheckforanything blockingthebeamoflight. Ifnecessary, cleantheguidesusinga cleaningcardorasoftclothsoakedwithisopropylalcohol. Do notuseanyothertypeofchemicals.

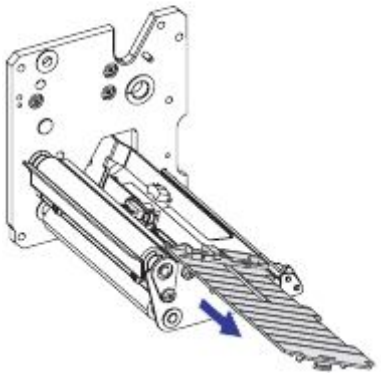
Isopropylalcohol[(CH-3)2CHOH;CAS67-63-0]isahighly flammable, moderatelytoxic, andmildlyirritatingsubstance.

To clean the Label Stop Sensor

1Pulltheupperguidestraightout.(Upperpartofprintunit omittedforbetterview.)



2Pressthesnap-lock,lifttheouterendofthelowerguideand pullitout.Aftercleaning,reassembleinreverseorder.



Replacing the Printhead

Theprintheadissubjecttowearbothfromthedirectthermal mediaortransferribbonandfromtherapidheatingandcooling processduringprinting. Thus, theprintheadwillrequireperiodic replacement.

Timebetweenprintheadreplacementsdependsontheprint images, thetypeofdirectthermalmediaorribboninuse, the amountofenergytotheprinthead, theprintspeed, theambient temperature, andseveralotherfactors.

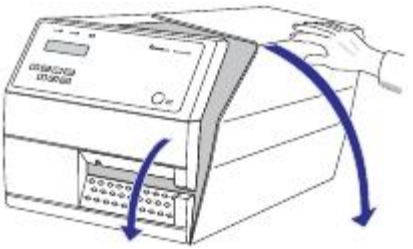
Whilereplacingtheprinthead, thepowermustbeoff. The firmwarewillnotdetectthenewprintheadresistanceand densityuntiltheprinterhasbeenrestarted.

- **Note:**Checkthatthedensityofthenewprintheadmatchesthe printheadyouarereplacing. Whileyoucanswitchbetween densitiesatwill, theprintoutwillbeaffectedaccordingly.

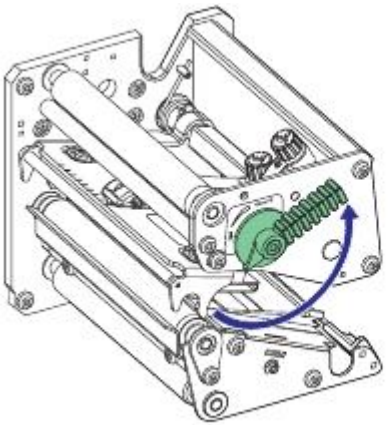
- **Note:**Priortoinstallingthe406dpiprintheadonthePX4i printerthefirmwaremustbeupdatedtoIPLFirmwareversion 2.74.0orhigher.

To replace the printhead

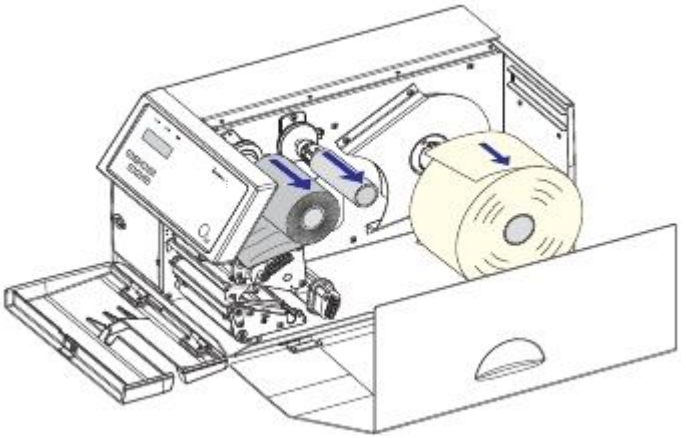
1Openthefrontandsidedoors.



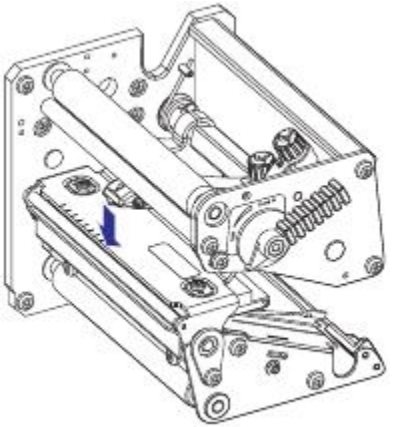
2Turntheprintheadliftlevercounterclockwisetoraisethe printhead.



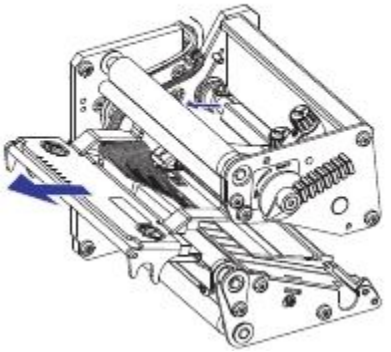
3Removeanymediaandtransferribbon.



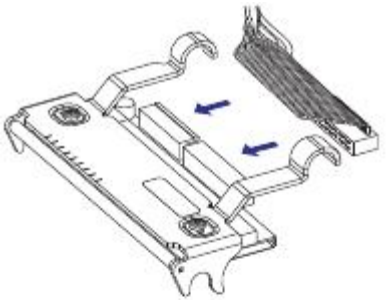
4Pulltheprintheadbracketawayfromthemagnetinthe pressurearm.



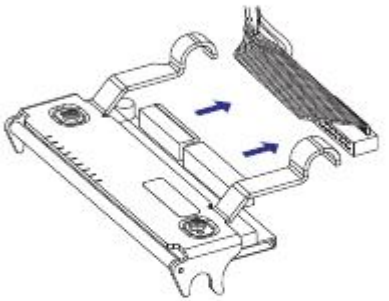
5Disconnectthehookedprintheadbracketfingersfromthe shaftandpulloutheprintheadasfarasthecablesallow.



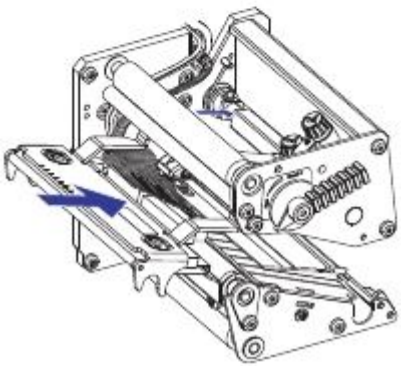
6 Disconnect the cables from the printhead. Note the snap-lock on the inner connector. Pull at the connectors—not at the cables!



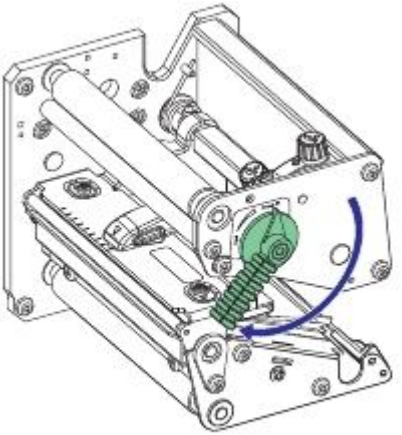
7 Connect the two cables to the replacement printhead.



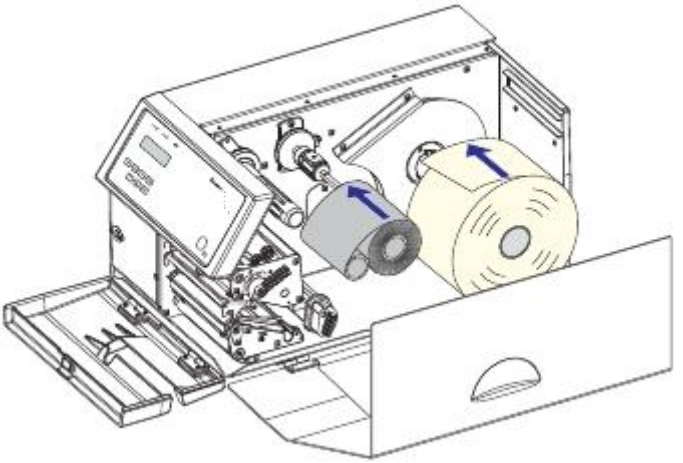
8 Fit the hooks of the printhead bracket fingers onto the head lift shaft. Make sure that the cables do not prevent the bracket fingers from being properly seated on the head lift shaft.



9 Close the printhead so the magnet engages the printhead bracket.



10 Load a new supply of media and ribbon, as described in "Loading Media" on page 17.



Media Jams

Shouldamediajamoccurintheprintmechanism,proceedthis waytoclearit.

To clear a media jam

1Alwaysswitchoffthepowerbeforestartingtoclearthe jammedmedia.

2Raisetheprintheadandpulloutthemedia.

3Ifthemediahasbeenwounduponorhasstucktotheplaten roller,carefullyremoveitbyhandwithoutusinganysharp toolsthatcandamagethedelicateplatenrollerorprinthead. Avoidrotatingtheplatenroller.

Ifyoumustpullawaythemediabyforcecausingtheplaten rollertorotate,itisveryimportantthatthepowerhasbeen offforaminuteormore.Ifnot,theelectronicscanbe damagedbeyondrepair.

4Cutoffanydamagedorwrinkledpart.

5Ifthereisanyadhesivesomewhereintheprintmechanism, removeitusingacleaningcardoracottonswabsoakedin isopropylalcohol.

Isopropylalcohol[(CH-3)2CHOH;CAS67-63-0]isa highlyflammable,moderatelytoxic,andmildlyirritating substance.

6Reloadthemediaasdescribedin **“LoadingMedia” on page17**.

7Switchonthepower.

8Readjustthemediafeedbyraisingandclosingtheprinthead andthenpressing**Feed/Pause**.

11 Adjustments

Thischapterdescribeshowtheoperatorcanadjusttheprinter.
Thechaptercoversthefollowingtopics:

- NarrowMediaAdjustment
- PrintheadPressureAdjustment
- LabelStopSensorAdjustment

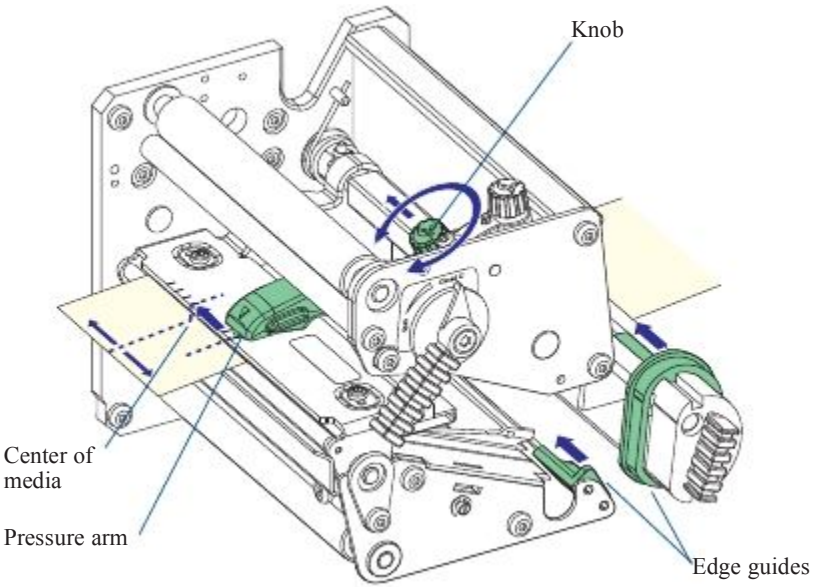
Narrow Media

Theprinterisfactory-adjustedforfullsizemediawidth. When usingnarrowermedia, adjustthepressurearmsoitremains centeredonthemediaandappliespressureevenly.

Apoorlyadjustedpressurearmmaybedetectedbyaweaker printoutoneithersideofthemediapath.

To adjust the pressure arm

1. Removetheribbon,ifany.
2. Loosentheknobthatholdsthepressurearm.Movethearm inwardsoroutwardsuntilthearrowonthetipofthearm becomescenteredonthemediastock. Whilemovingthearm, pushatthepartwheretheknobis situated, notatthetip. Ifthearmishardtomove, liftthe printheadandpulltheprintheadbracketfreefromthe magnetinthearm.
3. Lockthearminthenewpositionbytighteningtheknob.
4. Re-adjusttheedgeguides.
5. Reloadtheribbon,ifany.



Pressure Arm adjustment

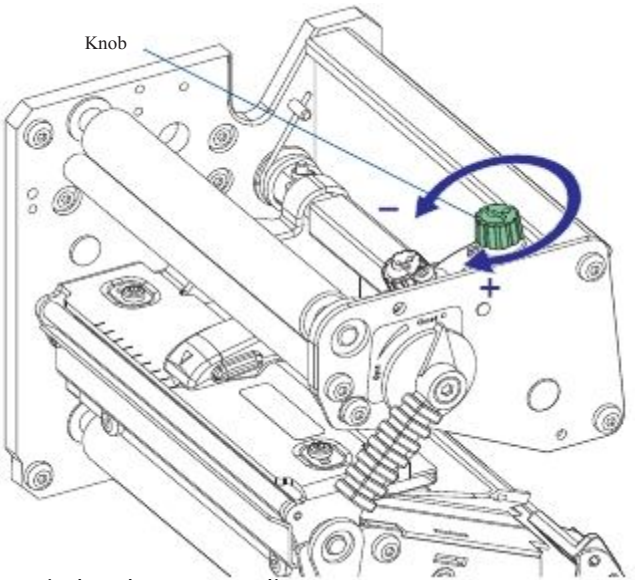
Printhead Pressure

The pressure of the thermal printhead against the ribbon or direct thermal media is factory adjusted. However, the use of thicker or thinner media than normal could require the printhead pressure to be readjusted.

Turn the adjustment knob clockwise for increased pressure, or counterclockwise for less pressure. Print a few labels, preferably test labels, and check the printout. For help printing test labels, see "Setting Up the Printer" on page 53. Increased pressure generally gives a darker printout and vice versa. Repeat until the desired result is obtained.

To find the basic setting, turn the knob counterclockwise until there is no pressure left. Test with a piece of media under the printhead. You should be able to pull it out without more than just a little resistance. Then turn the knob four full turns clockwise. Fine-adjust using the trial-and-error method.

Do not use a higher printhead pressure than necessary. Unnecessary pressure may increase the wear of the printhead and shorten its life.



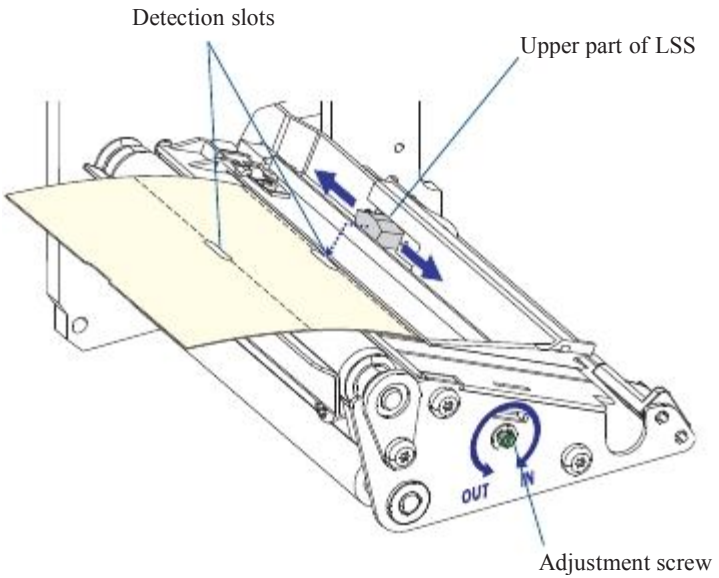
Printhead pressure adjustment

Label Stop Sensor

The label stop sensor (LSS) is a photoelectric sensor that controls the printer's media feed by detecting gaps between labels or slots or black marks in continuous stock, depending on the printer's setup in regard of media type. The LSS should be aligned with the gaps, slots, or black marks. If using irregularly shaped labels, align the LSS with the front tips of the labels.

The label stop/black mark sensor (LSS) can be moved laterally within a range of 0 to 50 mm (0 to 1.96 in) from the inner edge of the media path. There is a screw running through the outer lower gable. Turning the screw clockwise will move the LSS inwards and vice versa. The position of the LSS in relation to the media is best checked by looking head on into the print unit when the print head is raised. Align the center point of the V-shaped upper sensor with the center of the slots or marks to be detected.

The linear markings on the lower guide plate can also be used for positioning of the LSS because they are spaced with an interval of exactly 1 cm (0.39 in). This method is especially useful for black marks (measure the lateral position of the black marks with a ruler before loading the media).



Label Stop Sensor adjustment

IntheTest/ServicepartoftheSetupMode, youcantestthelabel stopsensorifyouhaveadetectionproblem.

Themenuprovidesonlyindicationsfromthelabelstopsensor unit. Thetestingmenucandetermineifthesensorunitisnot physicallyinposition, isblockedbydustorstucklabels, oris defectiveinsomeway. Furthermore, thisisanaidifmediahas detectioncomplications.

Note: Thereisnowaytoadjustthe LSS-function. Themenus onlyindicatevaluesfromtheLSS.

- Checkthattheprinterissetupforthetypeofmedialoaded inyourprinter. Navigateto**SetupMode>Media>Media type>Gap**, **Mark**, or**Continuous**.
- Liftandlowertheprinthead, thenpressthe**Feed/Pause**key.
- Makesurethatthereisalabel—notagapormark—atthe LSS.
- Checkthatthemediaisroutedasclosetothecentersectionas theguidesallow.
- EntertheSetupModeandnavigateto**SetupMode> Test/Service>LSSTest>LSSAuto**.

LSS Auto ■	Themenushouldlooklike this, withthecursorplacedin thecenter.
LSS Auto ■	Gapdetection:Liftthe printheadandpulloutthe mediaslowly. WhentheLSS detectsagaporadetection slot, thecursormovestothe right.
LSS Auto ■	Markdetection:Liftthe printheadandpulloutthe mediaslowly. WhentheLSS detectsablackmark, the cursormovestotheleft.

Returntothecenteredcursorpositionbypressing**Down**.

Ifthecursorbehavesasdescribedabove,theLSSisworkingand isproperlyalignedwiththegaps,slots,orblackmarks.

Ifthecursordoesnotreacttoagap,slot,orblackmark,check thefollowing:

- IstheLSSlaterallyalignedwiththeslotsorblackmarks?
- Areboththeupperandlowerpartof theLSSalignedwith eachother?
- Isthetransferribbonproperlyloadedsoitdoesnot interferewiththeLSS(See “LoadingRibbon” on page46)?
- Arethelabelstopsensorsfreefromdustandaretheguides freefromstucklabelsorotherobjectsthatmayinterfere withthelightthatgoesfromonepartoftheLSSto the other?Ifnecessary,cleanthesensors.
- Doesthemediahavesomekindofpreprintthatcan disturbthedetection?
- Istheretoolittledifferencebetweentheblackmarksand thesurroundingareas?
- Doesthelinerhavetoolittletransparency?
- DoestheLSSworkwithanothertypeofmedia? TochangetheMediaTypesetup,liftandlowerthe printheadandthenpress**Feed/Pause**.

A Technical Data

Thisappendixliststhetechnicaldatafortheprinter.Pleasenote thatIntermecreservestherighttochangethisinformation withoutpriornoticeandthatthisinformationdoesnotrepresent acommitmentonthepartofIntermec.

Printing

PrintTechnique
PrintheadResolution
PrintSpeed(variable)
PrintWidth(max)
PrintLength(max)
MediaWidth (min/max)
MediaRollDiameter (max)
MediaRollCore Diameter
RibbonWidth (min/max)
RibbonRollDiameter (outer),max.
RibbonRollCore Diameter(inner)
PrintDirections

Note1:Themaximumprintlengthisalsorestrictedbytheamountof freeSDRAMmemory.

Modes of Operation

Tear-Off(Straight-through)
Cut-Off
Peel-Off(Self-strip)
InternalBatchTakeup

Firmware

Firmware
OperatingSystem
SmoothFonts

Physical Measurements

Dimensions(W×L×H)	
Weight(excludingmedia)	
AmbientOperating Temperature	
StorageTemperature	
Humidity	

Electronics

Microprocessor	
On-boardFlashSIMMs	
On-boardSDRAMSIMM	16MB

Power Supply

ACVoltage	
PFCRegulation	
PowerConsumption	average125W;Peak400W

Sensors

LabelGap/BlackMark/OutofMedia	
PrintheadLifted	
RibbonEnd/RibbonLow	
PaperSensor	

Controls

LEDs	3
Display	
Keyboard	
Feed/Pausebutton	
Beeper	

Data Interfaces

Serial
ConnectionforOptional InterfaceBoards
CutterInterface
MemoryCardAdapter

Accessories and Options

IntegralSelf-stripUnitwith LinerTakeup
MediaRollRetainer
FanfoldGuide
Cutter
LabelTakenSensor
ParallelInterfaceBoard
EasyLANEthernetInterface
EasyLANWirelessInterface
CompactFlashCardsforvariousOption3 purposes

Option1:Factoryinstalledoption.

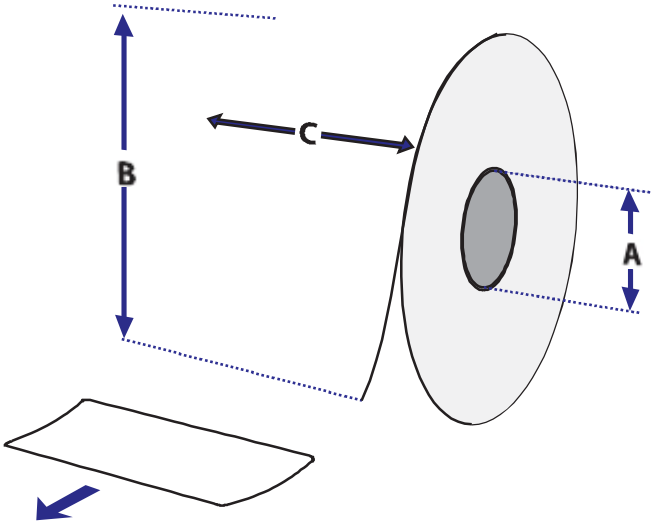
Option2:Field-installablekit.Installationshouldbeperformedbya servicetechnician.

Option3:Operator-installableoption.

B Media Specifications

Thisappendixspecifiesthephysicalmeasurementsforvarious typesofmedia.

Media Roll Size



Corediameter(A),standard:38to40mm(1.5in),withadapter:76.2mm(3in)

CoreWidth:Mustnotprotrudeoutsidethemedia.

Caution

Themediamustbewoundupontheincoreinsuchawaythatthe printercanpulltheendfree.

Max.diameter(B),tear-offandcut-off	
Max.diameter(B),peel-offandbatchtakeup	
Max.width(C)	
Min.width(C)	

Therecommendedmediathicknessis60to170μm(2.4to6.7 mils).Ifthickermediaisused,printqualitymaybereduced. Mediastiffnessmustbebalancedagainstthicknesstomaintain printquality.Mediarollstobeloadedinsidetheprintershould bewoundwiththeprintablesidefacingoutwards.

Themediasupplymustnotbeexposedtodust,sand,orgrit.Any hardparticles,howeversmall,candamagetheprinthead.

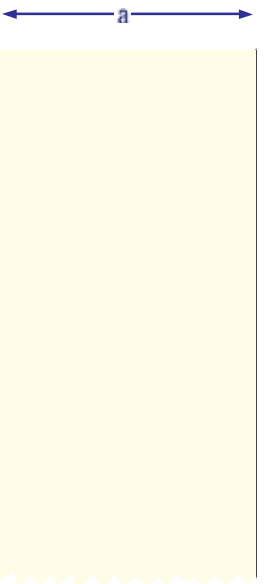
Media

Non-Adhesive Strip (Continuous Stock)

(a)MediaWidth

Minimum:25mm(1.00in)
Maximum:120mm(4.72in)

MediaTypeSetup:ContinuousStock



Self-Adhesive Strip (Continuous Stock)

(a)ExternalMediaWidth(includingliner)

Minimum:25mm(1.00in)
Maximum:120mm(4.72in)

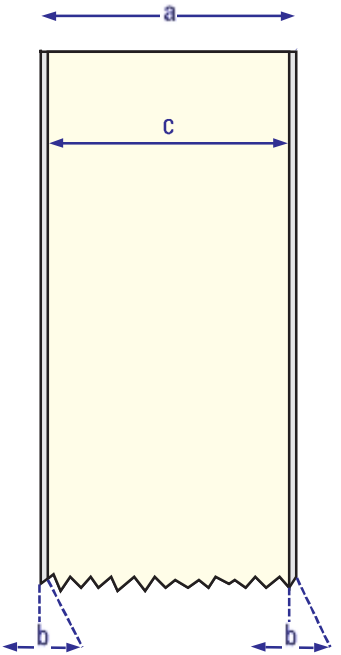
(b)LinerWidth

Thelinermustnotextendmorethanatotalof1.6mm(0.06in) pasttheedgeofthefacematerialandshouldprotrudeequallyon bothsides.

(c)InternalMediaWidth(excludingliner)

Minimum:23.8mm(0.94in)
Maximum:118.4mm(4.66in)

MediaTypeSetup:ContinuousStock



Self-Adhesive Labels (Gap Stock)

(a)ExternalMediaWidth(includingliner)

Minimum:25mm(1.00in)
Maximum:120mm(4.72in)

(b)LinerWidth

Thelinermustnotextendmorethanatotalof1.6mm(0.06in) pasttheedgeofthefacematerialandshouldprotrudeequallyon bothsides.

(c)InternalMediaWidth(excludingliner)

Minimum:23.8mm(0.94in
Maximum:118.4mm(4.66in)

(d)LabelLength

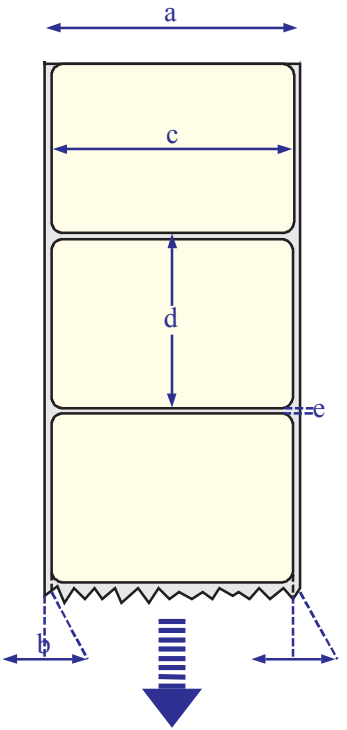
Minimum(withoutLTS):8mm(0.32in)
Minimum(withLTS):12mm(0.47in)Formoreinformation, see “LabelTakenSensor” onpage77.
Maximum:6,143mm(241in),providedthatthereisasufficient amountoffreeSDRAMmemory

(e)LabelGap

Recommended:3.0mm(0.12in)
Minimum:1.27mm(0.05in)
Maximum:25.0mm(0.98in)

TheLabelStopSensormustbeabletodetecttheextremefront edgesofthelabels.Formoreinformation,see “LabelStop Sensor” onpage104.

MediaTypeSetup:GapStock



Tickets With Gaps (Gap Stock)

(a)MediaWidth

Minimum:25mm(1.00in)
Maximum:120mm(4.72in)

(b)LinerWidth

Minimum(withoutLTS):8mm(0.32in)
Minimum(withLTS):12mm(0.47in)Formoreinformation, see “LabelTakenSensor” onpage77.
Maximum:6,143mm(241in),providedthereisasufficient amountoffreeSDRAMmemory

(c)LSSDetectionPosition:Variable,see “LabelStopSensor” on page104.

(d)DetectionLength

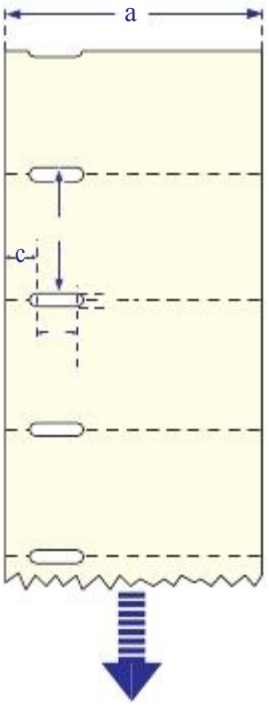
Thelengthofthedetectionslit(excludingcornerradii)mustbea minimumof2.5mm(0.10in)toeitherside(rightorleft)ofthe labelstopsensordetectionposition.

(e)DetectionHeight

Recommended:1.6mm(0.06in)
Minimum:1.27mm(0.05in)
Maximum:25.0mm(0.98in)

MediaTypeSetup:GapStock

Note:Handleperforatedmediacarefullytoavoidripsorbreaks alongtheperforations.Brokenorrippedperforations,particularly attheedges,maycausethemediatobreakormisfeedduring printing.



Tickets With Black Mark (Mark Stock)

(a)MediaWidth

Minimum:25mm(1.00in)
Maximum:120mm(4.72in)

(b)CopyLength

Minimum:20.0mm(0.8in)
Maximum:6,143mm(241in),providedthereisasufficient amountoffreeSDRAMmemory

(c)LSSDetectionPosition:Variable,see “LabelStopSensor” on page104.

(d)BlackMarkWidth

Recommended:10.0mm(0.39in)
Minimum:5.0mm(0.20in)
Maximum:Fullmediawidth

(e)BlackMarkLength

Recommended:3.2mm(0.13in)
Minimum:1.27mm(0.05in)
Maximum:25.0mm(0.98in)

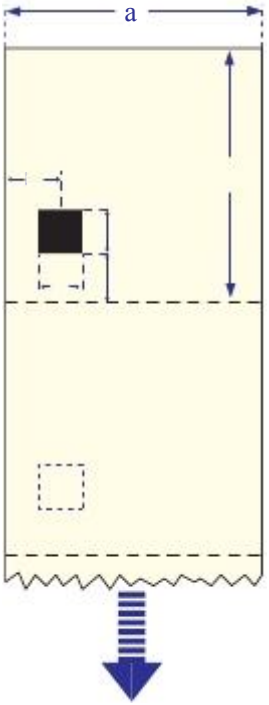
(f)BlackMarkY-Position

Itisrecommendedthatyouplacetheblackmarkasclosetothe frontedgeoftheticketaspossible.Theblackmarkcanbeplaced eitheronthetoporatthebackofthemedia.

BlackMarkCharacteristics
Maximumreflectance:15%,940nm
Differencebetweenmarkandmedia:55%

MediaTypeSetup:MarkStock

- Note:Handleperforatedmediacarefullytoavoidripsorbreaks alongtheperforations.Brokenorrippedperforations,particularly attheedges,maycausethemediatobreakormisfeedduring printing.


a

C Interfaces

Thisappendixdescribestheinterfaceconnectorsfoundontheprinter’srearplate.Itcoversthefollowingtopics:

- RS-232Interface
- USBInterface
- OptionalInterfaces

RS-232 Interface

Protocol For The Default Setup

Baudrate:9600

Characterlength:8bits

Parity:None

Stopbits:1

RTS/CTS:Disabled

ENQ/ACK:Disabled

XON/XOFF:Disabled(bothways)

NewLine:CR/LF

Tochangetheinterfacesettings,see “SettingUpthePrinter” on page53.

SIgnals On Printer’s Serial Port

DB-9

1

2

3

4

5

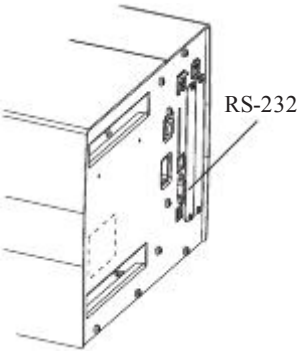
6

7

8

9

*Theexternal+5Vislimitedto500mAandisautomaticallyswitched offatoverload.



RS-232 Interface

Interface Cable

Computerend:Dependsoncomputermodel

Printerend:DB-9plug

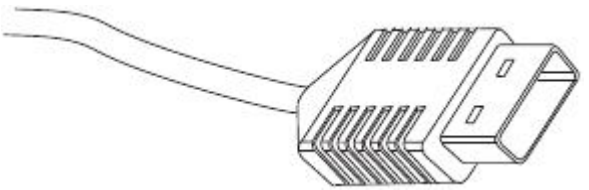
USB Interface

ThisprintersupportsUSBv1.1(alsocalledUSB2.0fullspeed). TousetheUSBinterfaceforprintingfromaPC,youneeda specialIntermecUSBprinterdriverinstalledinyourPC.

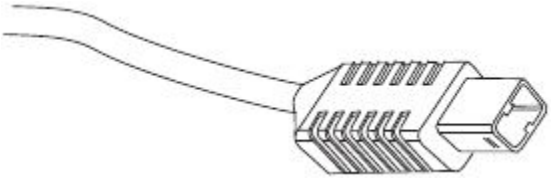
Theprinterisaso-called“self-powereddevice.”Werecommend thatyouonlyconnectoneprintertoeachUSBportonthehost, eitherdirectlyorviaahub.Otherdevices,likeakeyboardanda mouse,canbeconnectedtothesamehub.Ifyouneedtoconnect morethanoneIntermecUSBprintertoahost,youshoulduse differentUSBports.

UsingaUSBClassA/Bcable,connecttheClassAplugtoyour PCorhubandtheClassBplugtoyourprinter.

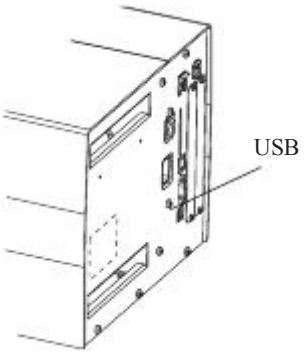
TheUSBinterfaceisessentiallyaone-waycommunication interface.Thereisnocommunicationsetupfor theUSBport.



USB Class A connector



USB Class B connector



USB Interface

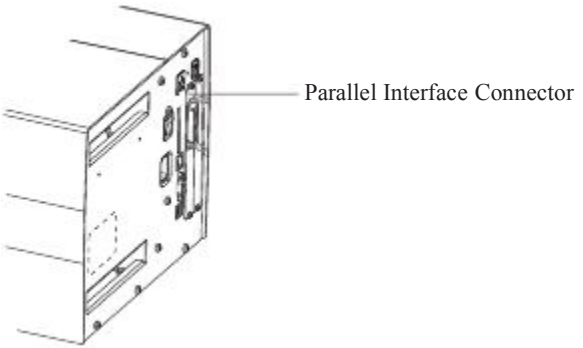
Optional Interfaces

Theprintercanoptionallybefittedwithan IEEE1284Parallel InterfaceBoardattheright-handsideoftheprinter's rearplate.

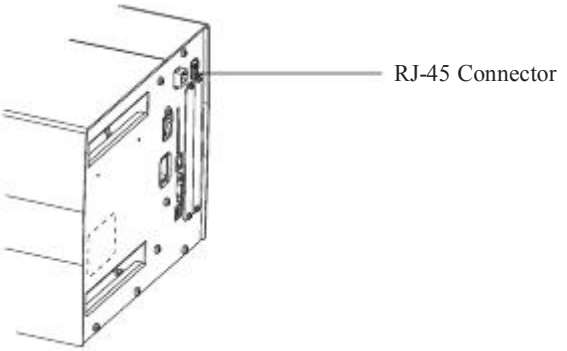
Theprintercanalsobefittedwithoneofthefollowing EasyLAN interfaceboardsforconnectiontoaLocalAreaNetwork(LAN).

- EasyLANEthernetInterface
- EasyLANWirelessInterface

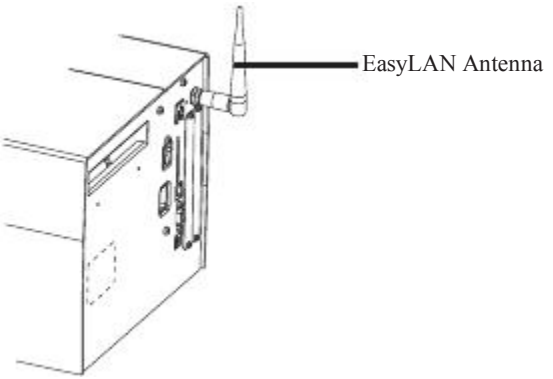
IEEE 1284 Parallel Interface Board



EasyLAN Ethernet Interface



EasyLAN Wireless Interface



For information on how to setup, operate, configure, and troubleshoot an EasyLAN interface, please refer to the following manuals included on the Printer Companion CD.

- *EasyLAN Interface Kit Installation Instructions*
- *EasyLAN Wireless Interface Kit Installation Instructions*
- *EasyLAN User's Guide*
- *EasyLAN Network Setup User's Guide*

D Media Sensitivity Number

Thisappendixdescribeshowtodeterminethecorrect Media SensitivityNumber(MSN)forvarioustypesofdirectthermal mediaorthermaltransferribbon.Italsoincludesinstructionson howtodeterminetheprinter’scurrentmediasensitivitysetting andhowtoadjustit.

The Media Sensitivity Number (MSN)

Themediasensitivitynumberspecifiestheamountofheatthe printheadneedstoimagealabel.Theamountofheatrequiredis uniqueduetodifferentchemistriesandmanufacturingprocesses. Settingthemediasensitivitycorrectlyoptimizesbothprint qualityandprintspeed

IntermechasdeterminedMSNsthatproducethehighestpossible printqualityforIntermecmediaandribboncombinationson Intermecprinters.

Determining the Printer’s Current Media Sensitivity Setting

YoucanuseSetupmodetoprintoutaconfigurationlabelthat includestheprinter’scurrentmediasensitivitysetting.For instructions,see “Test/Service” onpage70.

Bydefault,theprinterusesthesesensitivitysettings.

Default Media Sensitivity Settings

Media
Direct thermal media
Thermal transfer media

Changing the Printer’s Current Media Sensitivity Setting

UsetheSetupMode,PrintSet,third-partysoftware,orthe Intermecprinterlanguage(IPL)commandsettochangethe printer’smediasensitivitynumber.Thefollowingexamplesets theMSNto567usingtheIPLcommandset.

To set the sensitivity rating

1 Findthethree-digitsensitivityrating.

2 AttheDOSprompt,typethefollowingcommandandpress Enter:

```
MODE COM1 96,E,7,1,N
```

3 TypethefollowingcommandlinesandpressEnter:

```
COPY CON COM1
<STX><SI>g1,567<ETX>^Z
```

Determining the MSN for Intermec-Approved Media and Ribbons

To determine an exact media sensitivity number, obtain the part number of your media and/or ribbon and call 1-800-755-5505, press 1 and then 1. The part number may be printed on the outside of the box carton.

Both the thermal transfer media and ribbon have a sensitivity number. To determine the MSN, combine the digits. Note that "combine" does not mean "add".

Media or Ribbon	Sensitivity
Thermal transfer media	
Thermal transfer ribbon	

number.

Determining the MSN for Other Media and Ribbons

If you are not using Intermec-approved media and ribbon, you can still achieve good print quality by setting an approximate media sensitivity number.

If your media is not listed in the table below, but a similar media is, use the approximate sensitivity level listed in the first column to achieve acceptable print quality. For example: 800, 700, 100.

Ifyoucannotdetermineanapproximatesensitivitylevel,start withthehighestsetting(800forthermaltransferand700for directthermal)andworkyourwaydownuntilyouachieve acceptableprintquality.YoucanalsousePrintSet’sPrintQuality Wizardtohelpachieveacceptableprintquality.

Media Sensitivity Numbers for Intermec-Approved Media and Ribbons

Thefollowingtableslistexactmediasensitivitynumbersfor popularIntermec-approvedmediaandribbons.

Direct Thermal Media Sensitivity Settings

Sensitivity Level	
700SeriesHighSensitivity	710
400SeriesMediumSensitivity	450
	440
	430
100SeriesLowSensitivity	180
	170
	140
	120

Thermal Transfer Media and Ribbon Sensitivity Settings

Sensitivity Level	
800SeriesHighSensitivity (Paper)	
600SeriesMediumSensitivity (Synthetic)	687
	683
	677
	673
	657
	653
	637
	633
	627

8-milSyntheticTag(TMX2200),
DuratranIIMattePolyester(TMX2200),
ValeronTag(TMX2200)

8-milSyntheticTag(TMX1500),
DuratranIIMattePolyester(TMX1500),
ValeronTag(TMX1500)

Syntran(TMX2200)

Thermal Transfer Media and Ribbon Sensitivity Settings (continued)

Sensitivity Level	
500SeriesMediumSensitivity (Paper)	568
	567
	565
	563
	562
	537
	533
	527
	523
	518
	517
	513
300SeriesLowSensitivity (Synthetic)	

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